15c

# The OIL WEEKLY

FOR OIL AND GAS PRODUCERS AND ... THE WEEK'S NEWS INTERPRETED


# REED TOOL JOINTS

*FOR INSURED*

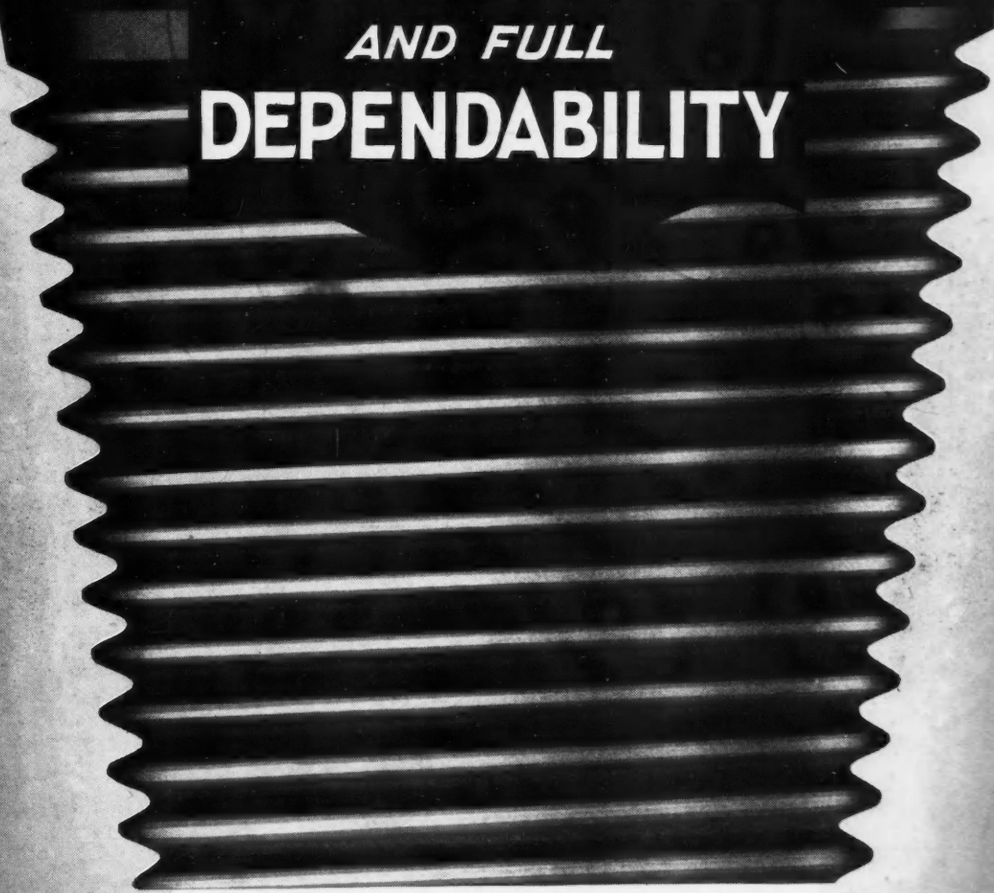
**QUALITY**

*GREATER*

**ENDURANCE**

*AND FULL*

**DEPENDABILITY**



**REED ROLLER BIT CO.**


VOLUME 81 APRIL 20, 1936 NUMBER 4

# Make Your Own Comparisons!

| Concrete Float Shoe and Collar Features | LARKIN | "A" Make | "B" Make |
|---|---|---|---|
| Forged and Heat Treated Steel Shoe | Yes | | |
| Hob Cut Threads | Yes | | |
| Strength of Steel Shoe | 77,000# Min. | | |
| Strength of Back Pressure Valve | 240,000# | | |
| Opening through 7" Shoe | 7 sq. in. | | |
| By-Passes in Water Channel | Yes | | |
| Ease of Circulation (at 600# pressure) | 109 gal. per second | | |
| Concrete Reinforcing Valve | 8 inches | | |
| Lapped Valves and Seats—Water-Tight | Yes | | |
| Positive Acting Valve | Yes | | |
| Amount of Metal Used | 4 oz. of Aluminum | | |
| All Concrete Parts Red | Yes | | |
| Sales in Oklahoma City Field | 80% | | |
| Sales in East Texas Field | More than all others combined | | |

**At All Supply Stores.**
**Warehouse Stock at Tulsa, Okla., Houston, Kilgore, and Odessa, Texas**

**LARKIN PACKER COMPANY, St. Louis**

# LARKIN PACKER CO.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $2.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

# COOPER-BESSEMER
## Builds It
# RIGHT

### BETTER METALS

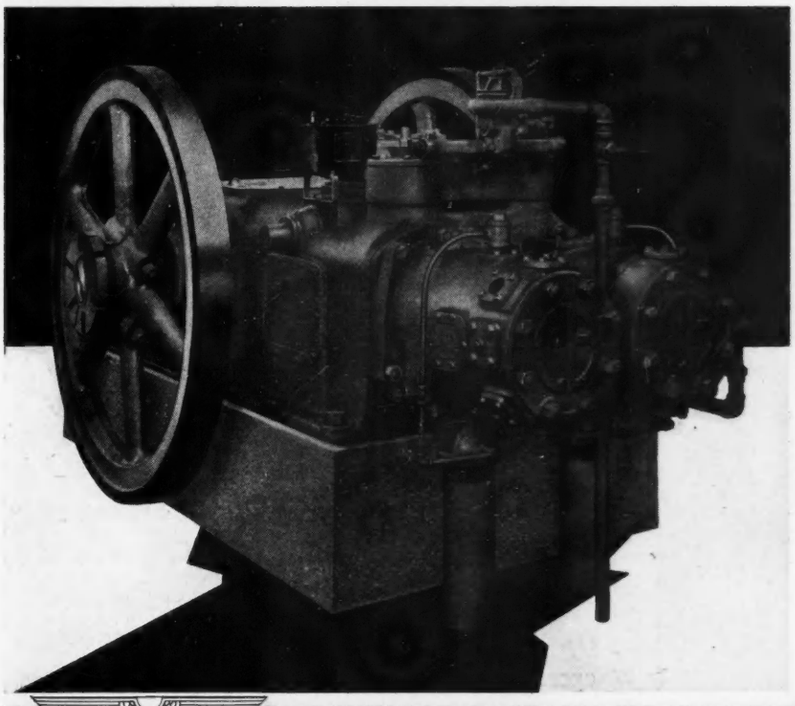
The "world of metals" is constantly explored by Cooper-Bessemer to find the ones that stand up longest under the shocks and stresses of oilfield service. These better engines have die-forged crankshafts, semi-steel main frames, drop-forged connecting rods — stronger metals throughout.

### BETTER DESIGN

Cooper-Bessemer design stands out because of 100% field-proved advancements like these: box-type main frame, extra-heavy Timken main roller bearings, fully cooled cylinders and heads, easily cleaned water jackets, and oil-immersed chain drive for governor, magneto, and lubricator.

### CLOSER INSPECTION

All the way through the production of these modern units, Cooper-Bessemer's rigid inspections safeguard your investment — insure satisfaction.



• IF Cooper-Bessemer pumping engines start easier, pick up faster, run longer without attention and adjustment, consume less fuel and oil, seldom need repairs and replacements — here's the reason: 101 years of engine-building experience is behind them. The design pictured is available in two horsepower ranges. The type GAW is convertible from gas to full diesel.

TYPE GAU 60—100 H. P.
TYPE GAW 90—150 H. P.

THE COOPER-BESSEMER CORPORATION

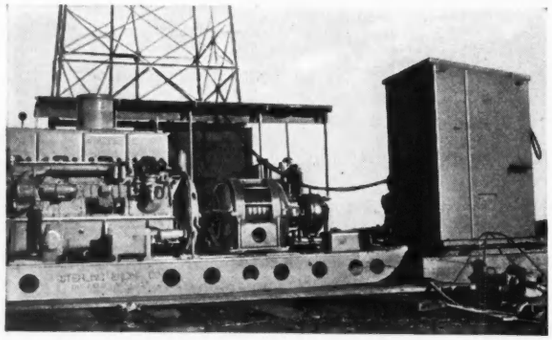
Mt. Vernon, Ohio — PLANTS — Grove City, Pennsylvania

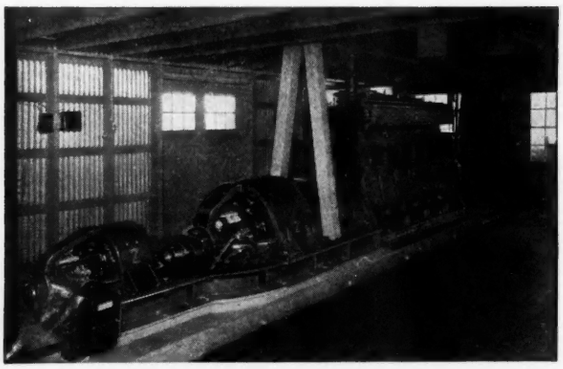
201 East 1st St. Tulsa, Okla.
1314 Magnolia Bldg. Dallas, Texas
25 West 43rd St. New York City
225 Crockett St. Shreveport, La.
505 Esperson Bldg. Houston, Texas

# Specify G-E DRIVE for Your Rotary Rigs

SPECIFY General Electric drive for your rotary rigs to assure dependable, economical drilling. General Electric offers either induction-motor drive, for use where a-c. power is available or where you prefer a-c. power from an engine-driven rig; or direct-current-motor drive, which provides the advantages of great flexibility and capacity.

With wildcat drilling increasing, the cost of rotary-rig operation is becoming more and more



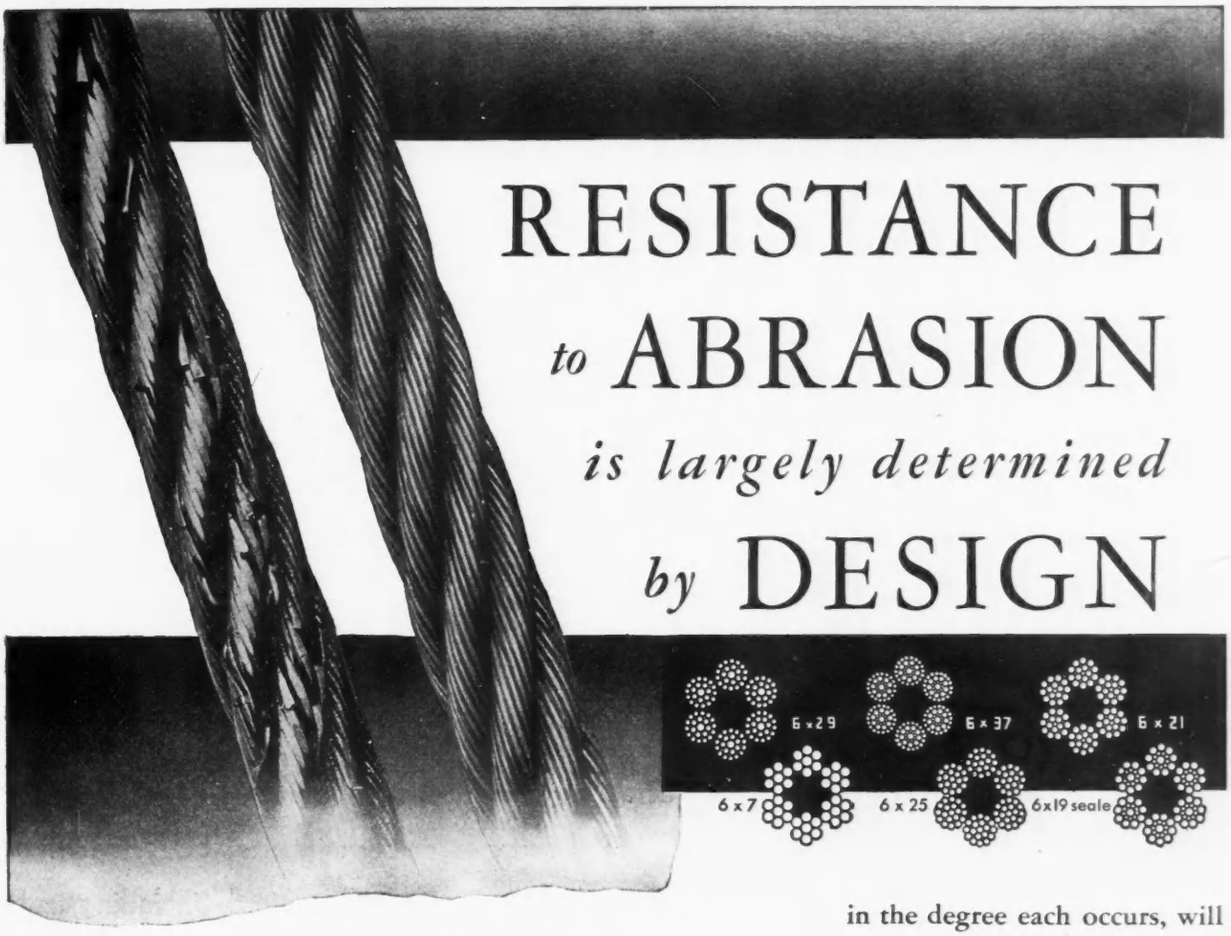


important. Power costs have been cut as much as 80 per cent by changing to G-E electric drive. You gain **DEPENDABILITY, PORTABILITY, FLEXIBILITY,** and increased **SALVAGE VALUE.**

Write or call the nearest G-E sales office today. An oil-well specialist will show you definite proof of savings that you can make by using G-E motors, generators, cable, and accessories in your drilling operations. General Electric, Schenectady, N. Y.

020-144

**GENERAL ELECTRIC**



# RESISTANCE *to* ABRASION *is largely determined by* DESIGN




## *Select the Rope that Fits Your Job*

When resistance to abrasion is the primary characteristic you demand in wire rope, select a rope with strands composed of few but heavy outside wires. Bear in mind, however, that the heavier the outside wires the less the rope is able to resist damage from bending. If wire rope in your particular service is subjected to both abrasion and frequent bending, it is wise to study the degree that each exerts as a destructive influence. The selection of a rope design that compromises resistance to abrasion with resistance to bending in the degree each occurs, will result in the longest possible rope life. Further information on this subject will be gladly sent to you upon request.

●

WICKWIRE SPENCER STEEL COMPANY, *General Offices:* 41 East 42nd Street, New York. *Sales Offices and Warehouses:* Worcester, New York, Chicago, Buffalo, San Francisco, Los Angeles; *Export Sales Dept.:* New York. WICKWIRE SPENCER SALES CORPORATION, New York, Chattanooga, Tulsa, Portland, Seattle.

# WIRE ROPE *by Wickwire Spencer*

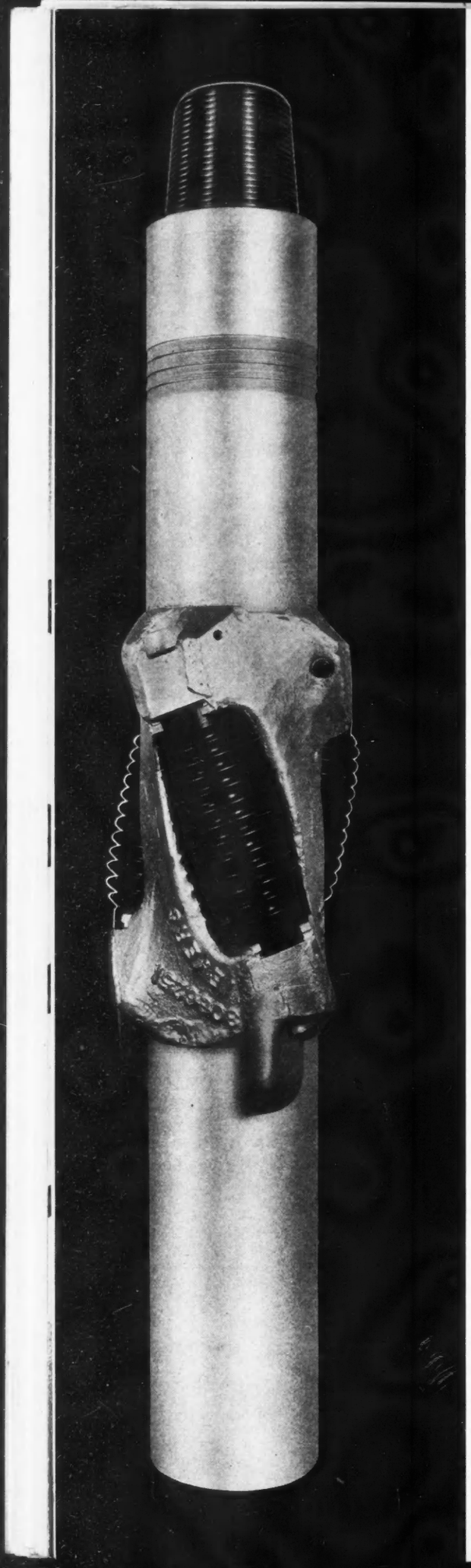
WICKWIRE SPENCER STEEL CO.
41 East 42nd St., New York City
Please send me reprints of previous advertisements which tell "How to make Wire Rope last longer".

Name_____

Firm_____

Address_____

City_____ State_____



# Check

## THESE IMPORTANT

# FEATURES

## of the SIEVERS REAMER

1. POSITIVE shearing action.
2. Increased amount of wall contact.
3. Patented cutter assembly minimizes body repair.
4. No replacement of parts required (including main pin) per assembly.
5. Maximum clearance between body and drilled hole.
6. Easy shearing action, eliminating excessive torque on equipment.
7. Lowest cost per foot of hole.
8. Highest quality of material and workmanship.

*For full details refer to Composite Catalog pages 1138-39.*

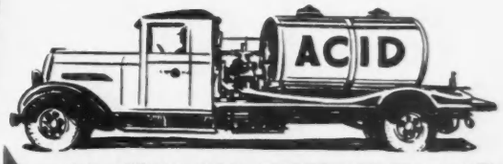
**SECURITY ENGINEERING CO.**

108 West Whittier Boulevard, Whittier, California
MID-CONTINENT—Wilson Supply Co., Houston, Texas
EXPORT—420 Lexington Avenue, New York City

# SIEVERS REAMERS

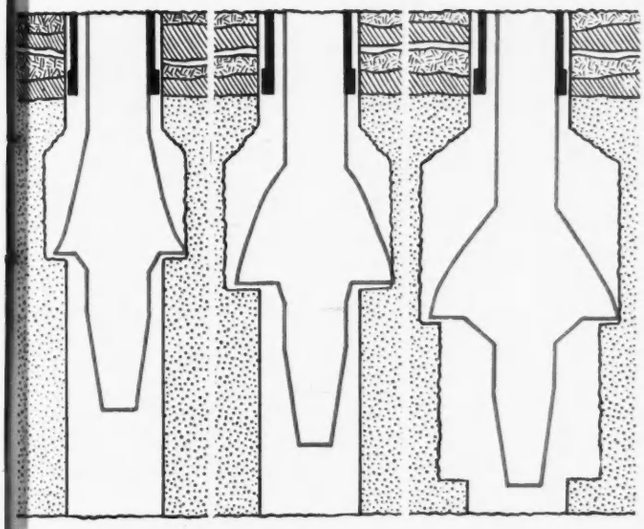
# 3 ADVANCED STEPS in Increasing Oil Production

→ SHOOTING

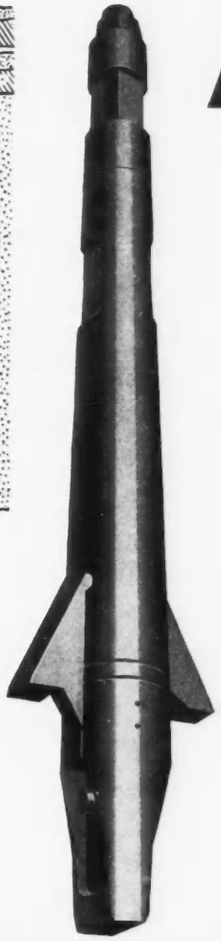



→ ACIDIZING

→ ...and now UNDERDIGGING with



In underdigging, the amount of hole enlargement is governed by the size of the Underdigger Cutters used. In reconditioning old wells, the walls of the "pay" formation may be cleaned and the diameter of the hole increased at several succeeding operations, or the maximum enlargement of approximately double the drilled diameter of the hole may be made.



## THE ROE "Pay" UNDERDIGGER

Both new and old wells that have been "shot" one or more times have been helped through use of the Roe "Pay" Underdigger by removing the glazed wall surface resulting from the heat of the "shot," and by opening-up that part of the producing formation not affected by the "shot"—

Lime wells have been helped through use of the Roe "Pay" Underdigger by enlarging the "pay" formation area so that the chemicals used in acidizing may contact a greater wall area—

Old sand, lime and shale wells have been helped through the use of the Roe "Pay" Underdigger by removing paraffin, gypsum, salt, mud and glazed surfaces from the face of the "pay."

The Roe "Pay" Underdigger is a cable tool that may be used effectively in increasing production in new or old wells of any depth. It's simple to operate—inexpensive to use.

**BRIDGEPORT MACHINE COMPANY**
MANUFACTURERS DISTRIBUTORS
OIL DRILLING-FISHING AND PRODUCTION EQUIPMENT
GENERAL OFFICE AND WORKS. WICHITA, KANSAS

• • Distributing Branches and Service Offices: Houston, Dallas, San Antonio, Tulsa, Oklahoma City and Wichita. Other Branch Stores and Warehouses in the active Mid-Continent and Gulf Coast oil field

# ACID TREATING Specialists

## WHO KNOW HOW

- **Every CHEMICAL PROCESS COMPANY operator is a man who not only KNOWS formations and pressures, but has had that actual, practical experience in the oil business which enables him to give any particular formation exactly the right acid treatment for best results.**
- **The CHEMICAL PROCESS COMPANY, having treated more wells in the Mid-Continent area than any other concern, has proven itself to be best qualified to handle your acid treating problem.**
- **The CHEMICAL PROCESS COMPANY is ready for immediate service throughout the States of Texas, Oklahoma, Kansas, New Mexico and Louisiana. Our laboratory is at your service for free tests of samples.**

***Phone, wire or write your nearest Chemical Process Company service station (listed below)***

CHEMICAL TREATMENT OF OIL AND GAS WELLS

## THE CHEMICAL PROCESS CO., Inc.

MAIN OFFICES
BRECKENRIDGE
TEXAS
PHONE
206

**WICHITA, KANSAS—**
Tel. 2-2478—RUFUS CLAY.

**RUSSELL, KANSAS—**
Tel. 493—C. R. VINCENT.

**WICHITA FALLS, TEXAS—**
Tel. 2-4307—W. E. (Bill) NORTON.

**BRECKENRIDGE, TEXAS—**
Tel. 206—P. W. PITZER, C. K. WEST, C. F. HOGAN, G. R. WHITNEY.

**LULING, TEXAS—**
Tel. 365—J. G. High.

**WEST TEXAS-NEW MEXICO—**
D. B. STRIPLIN, Manager.
ODESSA, TEXAS—Tel 21.
HOBBS, NEW MEXICO—Tel. 444.

**SEMINOLE, OKLAHOMA—**
Tel. 844—J. B. D. WOODBURN.

# in Step

## With GULF COAST Drilling Demands!

*See the full line of* **BAASH-ROSS**

*Safe, Modern Oil Tools*

**AT OUR HOUSTON FACTORY**

## 5300 CLINTON DRIVE

BAASH-ROSS TOOL COMPANY

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936

9TH WORLDS FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 16 TO 23

**Baash-Ross Products are described and illustrated on pages 115-166 of your**

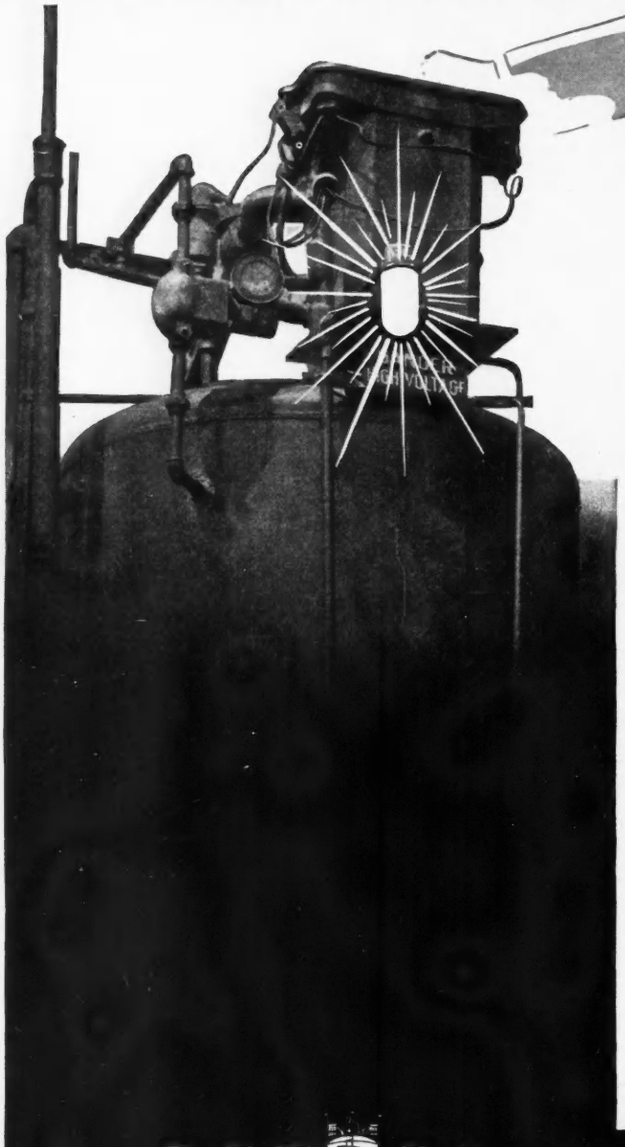
**1936 COMPOSITE CATALOG**

## BAASH-ROSS TOOL COMPANY

| Telephone 3-4406 | Telephone Fairfax 9363 | General Offices | Export Office |
|---|---|---|---|
| 1559 S. E. 29th St | 5300 Clinton Drive | 5512 Boyle Ave. | 30 Church St. |
| OKLAHOMA CITY | HOUSTON | LOS ANGELES | NEW YORK, N. Y., U. S. A. |

Gulf Coast Distributors NORVELL-WILDER SUPPLY CO.

# The AUTOMATIC WATCHMAN



## CUTS LABOR COST TO MINIMUM

In addition to automatic operation — from the well or wet oil tanks to dry stock—each individual Petreco Electromatic dehydrating unit is equipped with a signal light near the top which serves as an automatic attendant, constantly watching over and indicating the "cut" on the treated oil. Any change in the operating procedure or in the cut of the treated oil, however slight, is indicated immediately by this infallible attendant that is clearly visible at a considerable distance and is always on the job.

The advantages of such features of Petreco Electromatic Dehydration are of outstanding importance. Less plant supervision is necessary. The cost of labor is less than for any other method of treating. Uniform cut, and plant performance, are precisely maintained. Savings throughout the entire electromatic dehydrating procedure reduce over-all treating costs to absolute minimum.

Complete information relative to Petreco Electromatic Dehydration of crude oil emulsions will be supplied to any operating oil company on request.

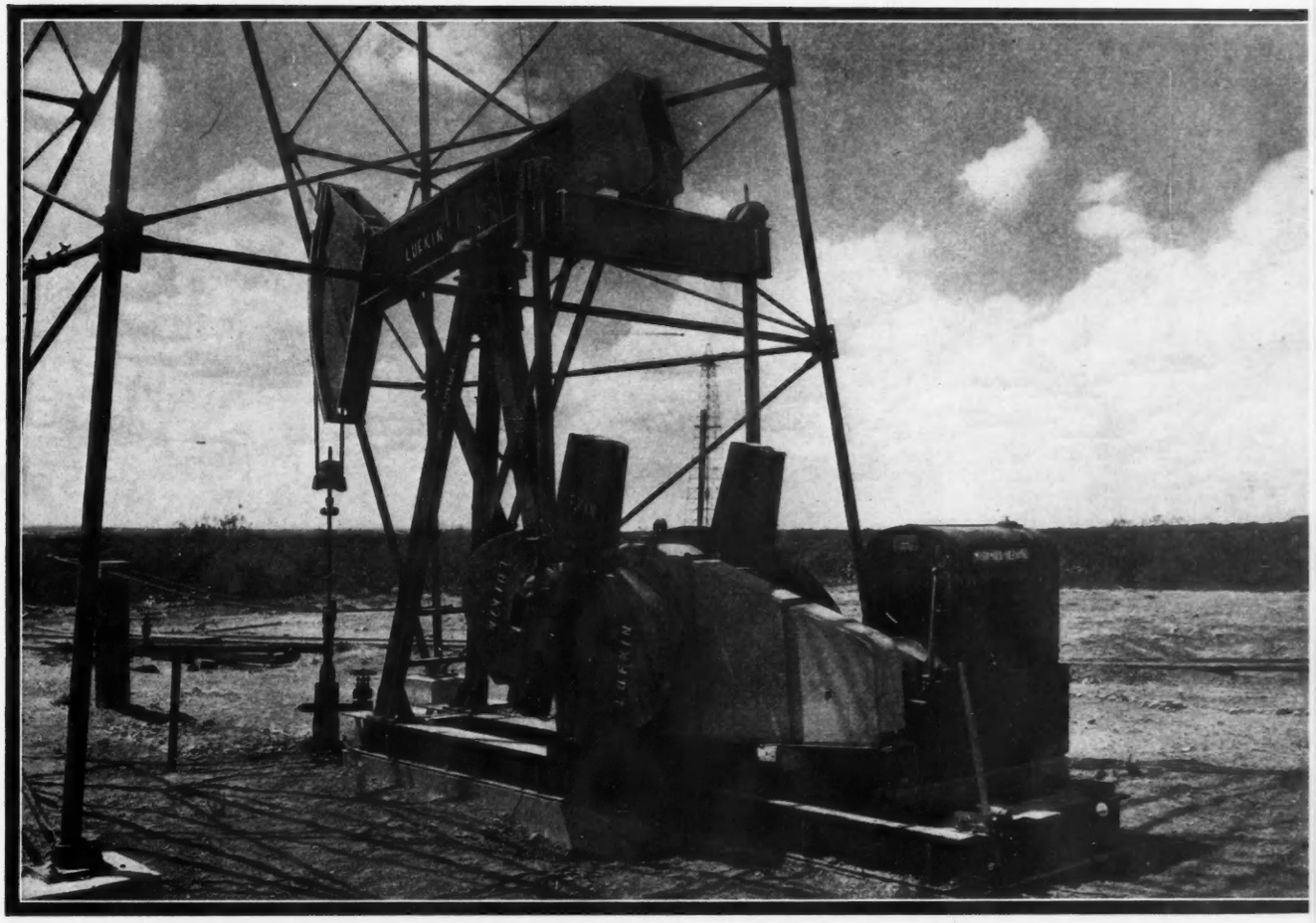
PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

General Offices: 530 W. Sixth St., Los Angeles, Calif., U.S.A.
Branch Office: Houston, Texas. Branches and Service Men in Principal Oil Fields.

PETRECO

Electromatic [ELECTRICAL-AUTOMATIC] DEHYDRATION

# A TYPICAL GULF COAST "Lufkin"



Magnolia Petroleum Company, Loma Novia pool, Government Wells field, Duval County,
LUFKIN Unit Assembly T.C. No. 3-18 with gas engine drive.

## GULF COAST, EAST TEXAS, CALIFORNIA, OR WHAT HAVE YOU

*. . . There is a* **LUFKIN UNIT** *for every well depth and condition*

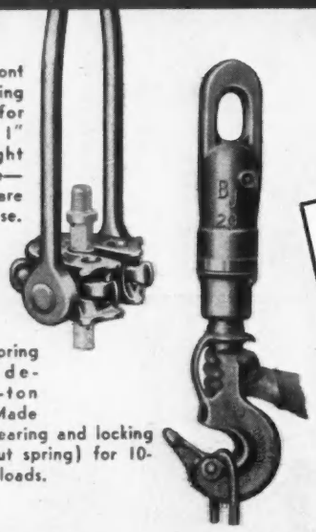
**These rugged, well designed unit assemblies are giving trouble-proof performance in practically every oil field of the world. As pioneers and specialists in the manufacture and sale of geared pumping units for oil well pumping we draw from a wealth of experience in the design and application of gears for this particular branch of the oil industry. *No Lufkin Herringbone Gear has ever failed in service!***

**Lufkin Pumping Units are manufactured in Lufkin, Texas, by the LUFKIN FOUNDRY & MACHINE COMPANY.**
***Sales offices in* Houston, Dallas, Tulsa, Henderson, Los Angeles, Bakersfield, and New York City.**

# LUFKIN

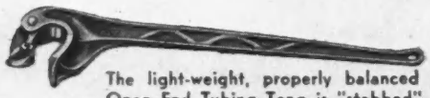
## PUMPING EQUIPMENT

# FLASH! LATE NEWS INDICATES

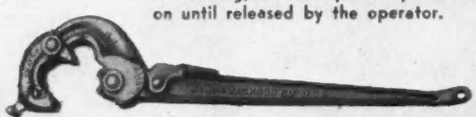


Equipped with front and rear operating latches; made for rods from 5/8" to 1" —in both a Light and a Heavy Type— BJ Rod Elevators are safe and fast in use.

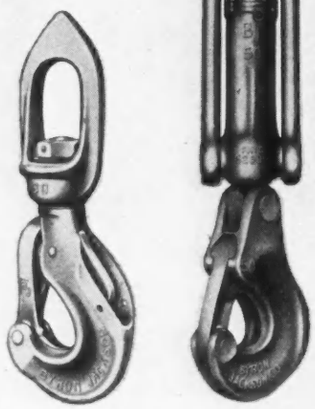
The BJ "20" Spring Rod Hook is designed for 20-ton strings of rods. Made also with ball bearing and locking arm (but without spring) for 10-ton and 15-ton loads.



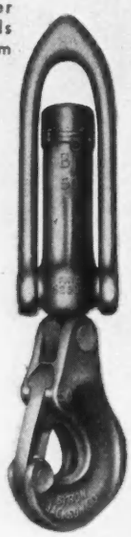
The light-weight, properly balanced BJ Open End Tubing Tong is "stabbed" on the tubing, ratchets perfectly and stays on until released by the operator.



The BJ Snapon completely encircles the tubing and locks in place. The "back-up" lever takes care of cross threads without removing tong from tubing.

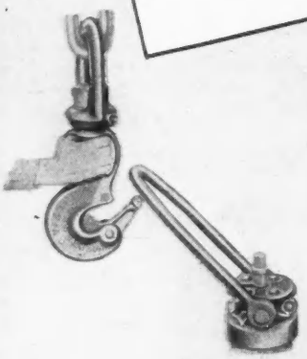


For short derricks where overhead clearance is important, use the BJ "30" Tubing Hook, with the strong, safe "locking arm".



The BJ "50" Tubing Hook is safe for 50-ton loads of tubing. Made with the "locking arm" and enclosed relief spring— also —in a size for 75 tons of tubing.

For tubing safety at all times you can depend upon the BJ Surestop Tubing Catcher which sets instantly and stops the fall without injury to casing, tubing or catcher. When set with a BJ Anchor, "tubing breathing" is eliminated, and increased production almost always is secured.



Here's a combination for fast working production crews! Note the open "locking arm" on the BJ "10" Rod Hook (here open to pick up the bail on a BJ Rod Elevator) which closes and locks to form a safe C-link when the load is lifted.

For Production Crews who Know How to Get the Job Done!

## BJ TOOLAGRA

MR OIL OPERATOR
OIL FIELDS JUNCTION

BEFORE PURCHASING ANY MORE SUGGEST YOU SEE 1936 BJ LINE AT STORE OR GET CATALOG AND OVER STOP YOU WILL APPRECIATE AND EFFICIENCY AND SEE AT THEY WILL INCREASE YOUR DON'T TAKE CHANCES WITH STYLE TOOLS

BYRON

**LOOK FOR BJ ON PAGES 288 TO 352 OF THE 1936 COMPOSITE CATALOG**

**BYRON JACKSON CO.**
and Subsidiary
FORT WORTH • LOS ANGELES • NEW YORK

# Profit Making DRILLING &

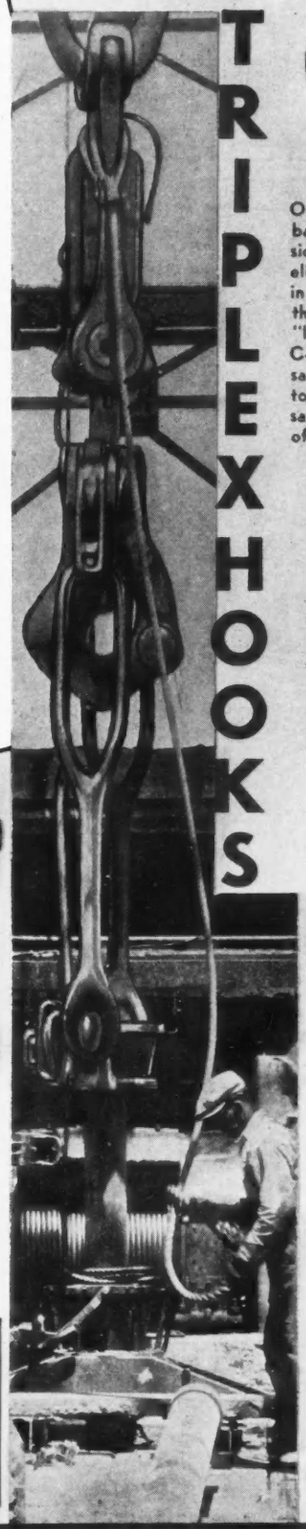
# A LANDSLIDE FOR BJ TOOLS!

For Drilling Crews who Dig Fast, Straight, Safe Hole!

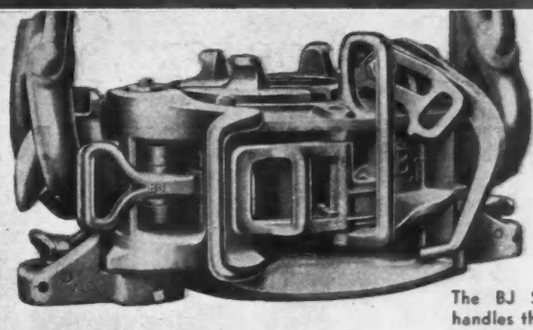
M

TOOLS
YOUR SUPPLY
LOOK THEM
THEIR SAFETY
ONCE HOW
PROFITS STOP
OLD

JACKSON CO

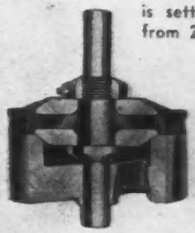


TRIPLEX HOOKS



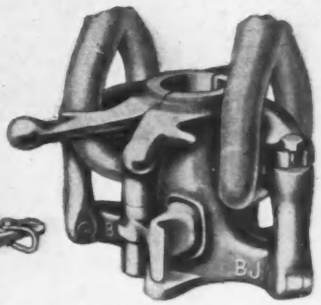
The BJ Side-Door Slip Elevator handles the longest strings of pipe without lifting under the collar or coupling. Four long slips grip the pipe at any desired point. Handled by one man on the derrick board, and may be removed while cement is setting. For all sizes of pipe from 2⅜" to 20".

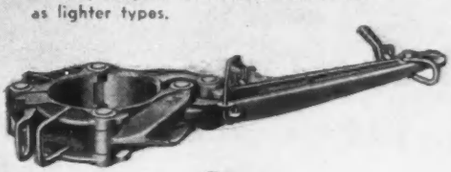
One hook for the swivel bail and a hook on either side for the elevator links eliminate off-center stress in BJ Triplex Hooks. All three of these hooks have "locking arms" which form C-links and afford complete safety. One size is for 150-ton loads — the "300" is safe for the longest strings of drill pipe or casing.



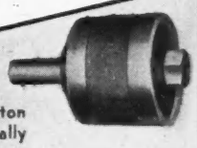
The rubber "shock absorber" in BJ Slush Pump Valves cushions the impact due to seating, and practically doubles the life. They are instantly, completely reversible without adjustment or replacement of parts.

Here is the BJ Extra Heavy Rotary and Casing Tong for fast action in making-up or breaking out Full Hole and other large diameter tool joints—as well as handling casing up to 8⅜" O.D. Safe also for breaking out drill collars, core barrels, etc., but as fast and convenient as lighter types.

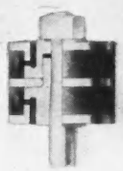


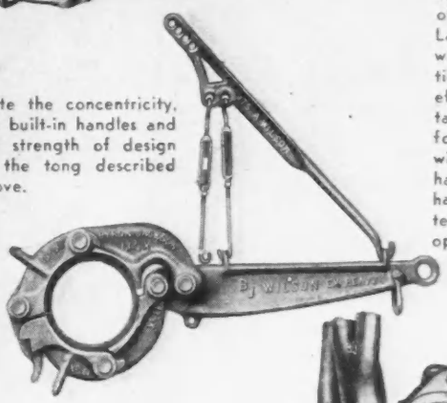


The fully heat-treated body of the BJ Type A Center Latch Elevator successfully withstands (without upsetting) the terrific pounding effect of tool joints contacted at high speed. Built for long, hard service—with long, safe operating handles, a convenient rear handle—and a latch protected against accidental opening.



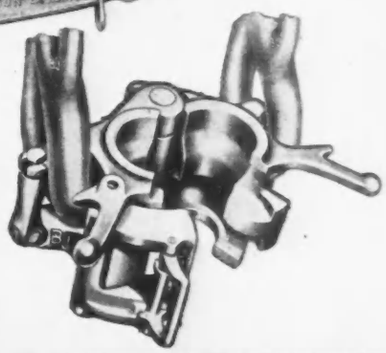
The BJ Pep Piston —with externally operated expansion — offers new efficiency in high pressure pump operation. Made for all sizes of popular make slush pumps.





Note the concentricity, the built-in handles and the strength of design of the tong described above.

The efficient BJ (Craig) Pulsating Piston is popular wherever a long-wearing, trouble proof slush pump piston is required. Made for all regular sizes of slush pumps, in standard or high pressure types.



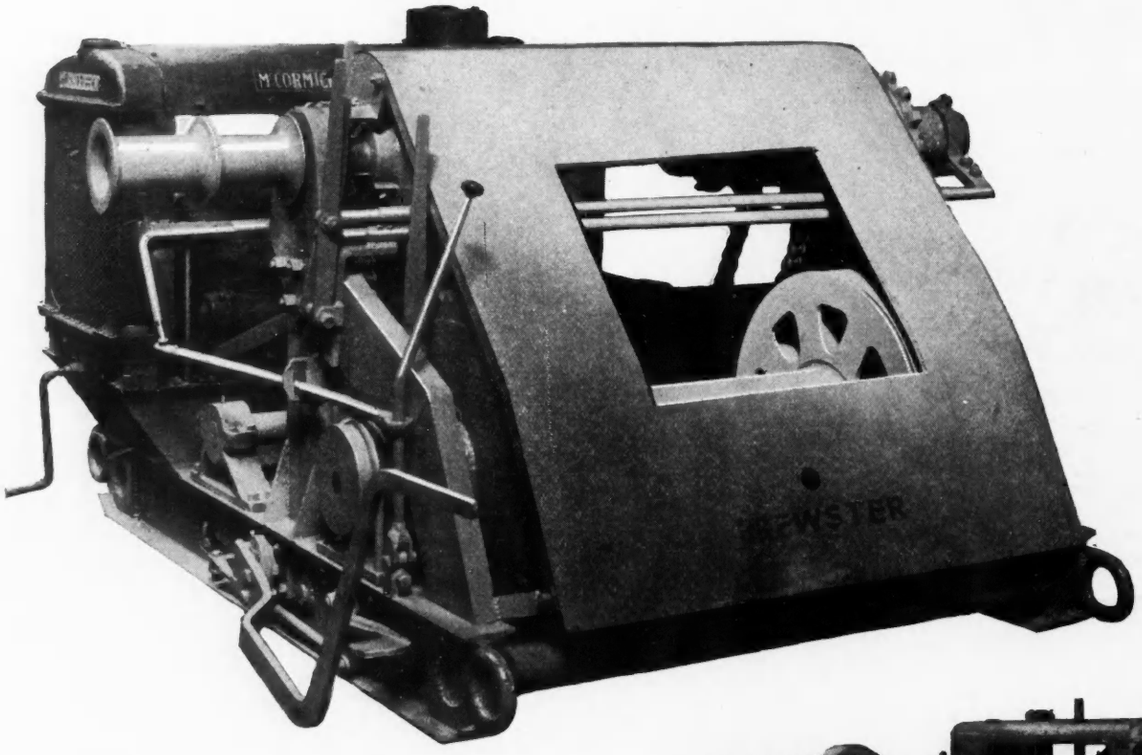
BJ Type "G" Elevators are designed and bored to handle upset drill pipe without using lifting plugs. Both the "G" Center Latch and the Side Door Type "B" are safe for the longest, heaviest strings of external upset drill pipe.

BJ

# PRODUCTION TOOLS

# *Brewster Scores Again!*

## . . . WITH PRACTICAL, PROVEN, PORTABLE DRILLING EQUIPMENT



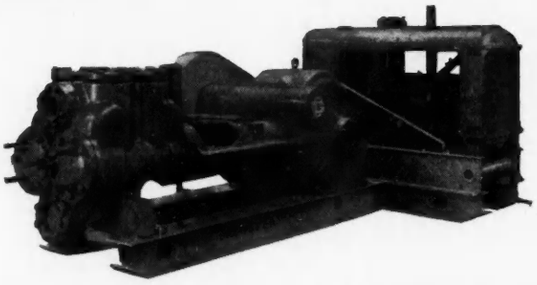

This BREWSTER HOIST, after several years of tough work in various fields, is now officially ready for drilling and servicing wells.

And it's a WOW! It gets the job done with greater efficiency and economy than any portable unit you ever saw. Solid, sturdy, with no useless "gadgets."

Designed and powered for wells of any depth. Mounted on skids for easy handling.

•

*Get acquainted with* BREWSTER *Products!*



### MOTORIZED SLUSH PUMP
### . . . . portable, unitized

This BREWSTER Portable Slush Pump, with our portable draw works, gives you an ideal rig, completely unitized. Designed for holes of any depth, using your favorite pump, with power unit to match, mounted on skid-type frame, unit-welded. Give us your requirements—we'll do the rest!

# The BREWSTER COMPANY, Inc.

**TELEPHONE 3181** — **SHREVEPORT, LA.**

| LONGVIEW, TEXAS | LAKE CHARLES, LA. | HOUSTON, TEXAS | RODESSA, LA. |
|---|---|---|---|
| 313 E. Cotton St., | Broad & Shattuck | 2000 Harrington St., | Phone 29 |
| Phone 781 | Phone 256 | Phone C-6811 | Rodessa Exchange |

EXPORT OFFICE: Acme Well Supply Co., 136 Liberty Street, New York City

# EXPERIENCE *and* SERVICE

★ Republic and its distributors are old-timers in the oil fields—grew up with their development—know their problems from A to Z.

Republic technical men visit hundreds of wells yearly, devoting their long experience to a better solution of transmission problems.

Distributors maintain large stocks of Super Excelo in all widths and plies—responding with instant service on demand—meeting emergencies as a matter of routine.

You can depend on Republic and its distributors for experience and service that will keep your operations moving at highest efficiency.

## SUPER EXCELO
## OIL COUNTRY BELTING

MID-CONTINENT DISTRIBUTORS
Frick-Reid Supply Corporation, Tulsa, Oklahoma
The Bovaird Supply Company, Tulsa, Oklahoma

PACIFIC COAST DISTRIBUTORS
W. C. Hendrie & Company, Inc., Los Angeles, California
Pacific Coast Rubber Company, San Francisco, California

# THE REPUBLIC RUBBER CO.

**YOUNGSTOWN, OHIO**

Manufacturers of Rotary and all other types of Hose, Transmission Belting, Packing, Gaskets, Rings, etc. for Oil Country Service

# ☆ UNIFORMITY

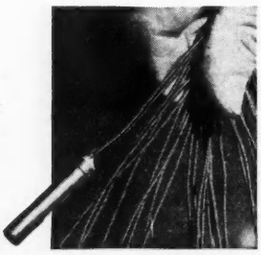
# ☆ NO LAG

## 2 outstanding features

*of the*

## DU PONT

## SSS ELECTRIC BLASTING CAP



UNIFORMITY is of primary importance to the Seismographic Prospector in either Reflection or Refraction Shooting. Here is a detonator that assures *greater accuracy* in timing. The new Du Pont SSS Seismograph Electric Blasting Cap is designed to satisfy the exceptionally severe requirements of Geophysical Prospecting.

Because of the unique construction of the cap, the bridge wire is always broken by the detonation of the cap, irrespective of the firing amperage employed. This characteristic is invaluable to those Seismographic Prospectors using recording instruments designed so that the severance of the bridge wire represents the time-break. By eliminating the *lag* from bridge wire break to detonation, the overall time from application of current to detonation has been reduced to the lowest possible minimum.

This added feature is of particular interest where the time-break involves the uniformity of two caps; that is, one to detonate the dynamite charge and the other to break the time circuit.

The satisfactory performance of the Du Pont SSS Seismograph Electric Blasting Cap is achieved through the selection of the proper cap ingredients and not by means of undesirable external mechanical devices.

**E. I. DU PONT DE NEMOURS & COMPANY, INC., EXPLOSIVES DEPARTMENT, WILMINGTON, DEL.**

DU PONT
REG. U. S. PAT. OFF.

# SEISMOGRAPH EXPLOSIVES

# MASTER
## CORE DRILL OF ALL TIME

The Elliott Model "A" Combination Core Drill embodies all that fifteen years of intensive, specialized research, study and actual coring experience have enabled the world's leading oil well coring engineers to develop and build into a tool designed to obtain maximum footage and recoveries of satisfactory cores, in all formations, in any well, at minimum operating and maintenance costs, with the highest possible factor of safety in service.

It is the result of Elliott's long years of achievement—a scientifically designed tool that is manufactured of the best materials, for the toughest service, and engineered to meet actual conditions as they exist in the hole—the finest, most efficient, dependable and safe coring equipment that able engineering, practical experience, fine materials and precision manufacture can produce.

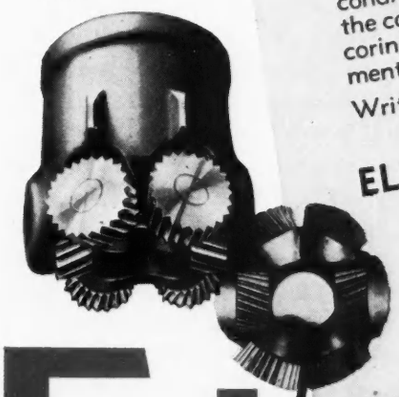
It is adapted to all well, field and operating conditions, with two types of cutter heads for the complete range of formations. One set of coring equipment for all coring requirements, assuring minimum investment.

Write for Bulletin No. 36-R.

**ELLIOTT CORE DRILLING COMPANY**

4731 East 52nd Drive, Los Angeles, California
Export Office: 420 Lexington Ave., New York City

Elliott Hard Formation Cutter Head for coring the hardest, toughest formations.



# ELLIOTT
# *Combination*
# CORE DRILL

**FOR ALL**

Formations
Well Conditions
Field Conditions
Operating Conditions
Coring Requirements

Elliott Combination Core Drill completely assembled, with regular type cutter head, for coring all soft and average formations. Interchangeable with hard formation heads of similar sizes.

# Fishing for FACTS means less fishing for RODS . . .

● Why not let us fish for facts in your most troublesome well? Sounds like we're looking for trouble, doesn't it? Well—we are—looking for *your* trouble.

But why not let us try it? When we fish for facts—we then know what your pumping conditions are and what type of sucker rod will give you the best service in that particular well. The results will convince you. Here's a good example:

A certain large Mid-Continent producer had a "maverick" well in West Texas where two strings of rods had given unsatisfactory service. The last string had 13 breaks in 103 days with the first on the 24th day and 6 breaks in 72 days.

Our well study showed the wrong type of rod was used, field handling was improper and pumping conditions were bad. We put our suggestions in a report showing that Jones Type 7 Rod would fit the conditions and that better handling; clean, tight joints, etc., would give better rod service.

Results—103 days service with Jones Type 7 Rod and only one break—that due to not making up a tight joint.

That's 13 to 1 better service and that's why so many producers come to Jones with their troubles. You want to avoid unnecessary shut-downs, reduce production losses and save money on pumping costs—and the Jones Field Engineering Department at Tulsa can help you do it.

**A TYPE TO FIT EVERY PUMPING CONDITION**

We'll be looking for you at Booth 18 & 19, Oklahoma Bldg., Tulsa Exposition

**MAY 16-23**

# JONESUCKERODS

THE S. M. JONES COMPANY, GENERAL OFFICE AND FACTORY, TOLEDO, OHIO
SALES DEPARTMENT, 715 McBIRNEY BUILDING, TULSA, OKLAHOMA—HOUSTON OFFICE, 1008 STERLING BUILDING—EXPORT OFFICE, 19 RECTOR STREET, NEW YORK CITY

APR 22 1936

©C1B 298428

# THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

**EDITORIAL STAFF**

WARREN L. BAKER
*Editor*

J. KENT RIDLEY
*Managing Editor*

**ASSOCIATE EDITORS**

L. J. LOGAN — BRAD MILLS
WM. V. GROSS

**DISTRICT EDITORS**

B. F. LINZ.....Washington
FLOYD SWINDELL.....Tulsa
H. H. KING.....Fort Worth
W. E. GREEN.....Los Angeles
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
CHAS. LEYENDECKER.....Houston

PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS
*Copyright, 1936*
R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*

*Staff correspondents at all important points.*

**ADVERTISING STAFF**

DICK SWINSKY.....New York
W. W. PIGUE.....Pittsburgh
T. W. NELSON.....Chicago
J. F. CARTER, JR.....Tulsa
W. E. GREEN.....Los Angeles
CHAS. WYATT.....Houston
WM. ATCHESON.....Houston

J. T. WAGONER
*Circulation Manager*

## Contents « April 20, 1936

**Volume 81, Number 5**

THIS WEEK ..... 21

THE CHANGING PANORAMA ..... 26

GENERAL NEWS:

Two Rodessa Deals—Haynes Sells to Standard and Norton to Magnolia ..... 22

City Drilling War—Oklahoma Legal Fight Over Zoning Apparently Ended ..... 23

Good Coast Session—Pacific Division of API has Interesting Program ..... 24

Equipment Displayed at Houston Show Includes Array of Standard and Specialty Products ..... 74

Equipment Featured at Oil Equipment & Engineering Exposition ..... 76

Men in the Industry's News ..... 32

Squeaks From the Bull Wheel ..... 160

ENGINEERING AND TECHNICAL:

Control Methods for Handling Gas-Lift Operations Strictly Scientific Studies ..... 35
By S. F. SHAW

Gas Gathering Lines—Extensive and Efficient Network in Panhandle Carries Huge Daily Volume ..... 51
By BRAD MILLS

Definite Procedure Plan May Be Outcome of New Extensive Study of Salt Water Problems ..... 66
By FLOYD SWINDELL

Water Knockout—Fitts Wells Have Water Removed by Simple But Efficient Device ..... 72
By JOHN C. ALBRIGHT

MARKETS AND STATISTICS ..... 107

WORLD DEVELOPMENTS AND TECHNOLOGY ..... 114

FIELD REPORTS ..... 118

NEW PRODUCTS AND MANUFACTURERS NEWS ..... 157

SPECIALIZED OIL JOURNALS
*Published by*
THE GULF PUBLISHING COMPANY

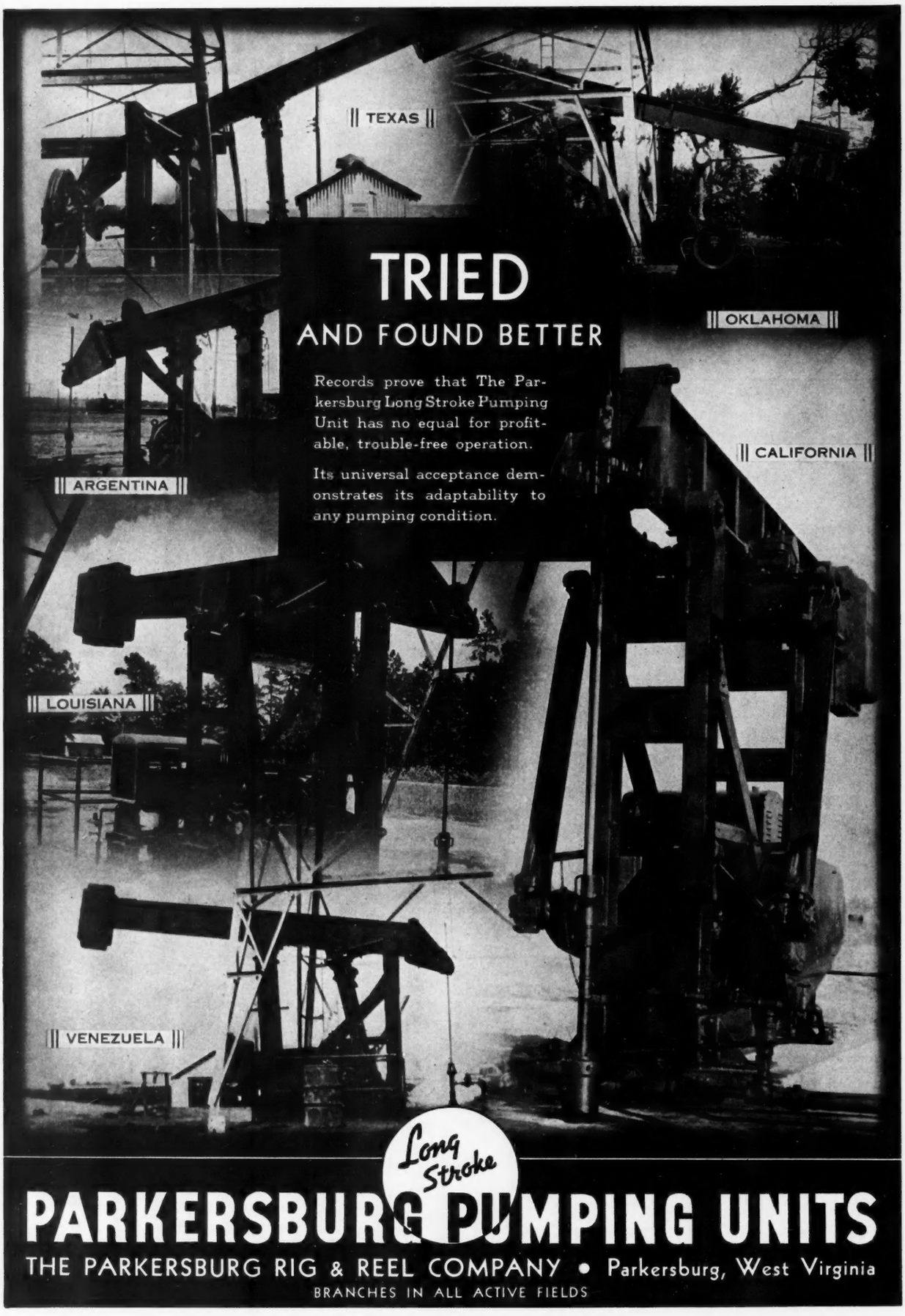
**BRANCH OFFICES**

NEW YORK.....250 Park Ave.
PITTSBURGH.....Standard Life Bldg.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES.....Haas Bldg.
TULSA.....Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

*Member Audit Bureau of Circulations.*

Published every Monday. Single Copies 15 cents. Subscription price: domestic and foreign, $2.00 a year. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies.

Advertising rates on application.


TEXAS
TRIED
AND FOUND BETTER
Records prove that The Parkersburg Long Stroke Pumping Unit has no equal for profitable, trouble-free operation.
Its universal acceptance demonstrates its adaptability to any pumping condition.
OKLAHOMA
CALIFORNIA
ARGENTINA
LOUISIANA
VENEZUELA
Long Stroke
PARKERSBURG PUMPING UNITS
THE PARKERSBURG RIG & REEL COMPANY • Parkersburg, West Virginia
BRANCHES IN ALL ACTIVE FIELDS

# THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor.


# . . . this Week

TWO important deals changed the ownership of the Rodessa field considerably. Magnolia Petroleum Company has purchased part of the holdings of R. W. Norton and Standard Oil Company of Louisiana bought the properties of Haynes Production Company. Of interest were the considerations paid, both indicating that the future of the industry is looked upon with optimism. **Page 22.**

IMPROVEMENT in the market situation was registered last week. Retail gasoline prices advanced in several localities, including both California and Mid-Continent. Tank car prices also firmed. Better markets no doubt were due to warmer weather. **Page 107.**

ANTI-TRUST law violations, which are being investigated by the Department of Justice, are to receive closer scrutiny as the department plants to broaden its activities. The oil industry is one of the two large businesses that has come to the attention of this department. **Page 22.**

FOLLOWING the death of the late President Gomez of Venezuela, oil companies have viewed with trepidation political developments expected to take place during the provisional government directed by Lopez Contreras. But—an executive of one of the major operators in Venezuela writes that Provision President Contreras (who is likely to be elected president April 19) is a pronounced progressive and generally in accord with mutually beneficient understandings which existed between the lamented president and foreign oil operators there. **Page 114.**

THE spring meeting of the Pacific Coast district of the Division of Production of the American Petroleum Institute was one of the largest affairs held by the division. More than 500 attended the technical sessions, while 737 were present at the banquet. An excellent technical program was a feature. **Page 24.**

THE legal battle over state and city drilling rights in the Mansion area of Oklahoma City has been stopped temporarily at least it appears. The court fight was stopped when the City Council voted to grant an election on whether state lands within the city could be included in the drilling zone. The election will not be held until May 12. **Page 23.**

DEMAND for crude oil by Texas purchasers continues to rank high. Last week at the regular statewide proration hearing nominations for buying 1,301,524 barrels daily during May were filed with the railroad commission. Naturally, it is not expected that the May allowable will be this high. The Bureau of Mines has estimated the market demand at 1,139,000 barrels and recommended an allocation of 1,132,500 barrels, which would allow a slight withdrawal from Texas stocks that have increased recently. **Page 23.**

## The Oil Man's Calendar

| | |
|---|---|
| APR. 20–25 | Oil Equipment & Engineering Exposition, Houston, Texas. |
| MAY 5– 8 | American Gas Association, Natural Gas Department, Dallas, Texas. |
| 13–15 | American Petroleum Institute, Mid-Year Meeting, Tulsa, Oklahoma. |
| 13–15 | Natural Gasoline Association of America, Tulsa, Oklahoma. |
| 16–23 | International Petroleum Exposition and Congress, Tulsa, Oklahoma. |
| 19 | National Association of Purchasing Agents, Tulsa, Oklahoma. |
| 21 | Independent Petroleum Association, Tulsa, Oklahoma. |
| 22 | National Stripper Well Association, Tulsa, Oklahoma. |
| 29–31 | National Oil Scouts Association, Annual Meeting, Baker Hotel, Dallas, Texas. |
| JUNE 4– 5 | American Petroleum Institute, Division of Production, Eastern District, Wm. Penn Hotel, Pittsburgh, Pennsylvania. |
| 17–20 | American Society of Mechanical Engineers, Dallas, Texas. |
| 18–19 | Pennsylvania Grade Crude Oil Association, State College, Pennsylvania. |
| JULY 31 | Interstate Oil Compact Commission, Dallas, Texas. |
| NOV. 9–12 | American Petroleum Institute, 17th Annual Meeting, Chicago, Illinois. |

GAS-LIFT operations if properly installed and controlled will produce large quantities of oil from great depths at a low cost, however, this is essentially an engineering matter and must be handled as such to be satisfactory. There are a number of control methods that should be considered by every engineer in charge of properties operating on gas lift, but years of practical training are still necessary. **Page 35.**

THE daily gas load gathered in the Texas Panhandle to supply one-eighth of the population of the United States with fuel requires an elaborate network of gathering lines that touch all parts of an area as big as the State of Delaware. A wide range of well pressures, fluctuating market demands, trouble from condensates, sudden weather changes, sharp surface contracts, and other unusual conditions necessitate the installation of a gathering system that functions satisfactory despite such factors. **Page 51.**

THE Oil Equipment and Engineering Exposition in Houston has the attention of many oil men this week. An array of machinery used in performing various operations in the field is on exhibit. The show will be open from April 20-25 inclusive. **Page 74.**

PHILLIPS PETROLEUM COMPANY has inaugurated an extensive and pioneer salt water disposal study. As a result a definite plan for studying the condition has been developed. Full cooperation from all companies no doubt would be of unestimable value to the industry. **Page 66.**

# *Two Rodessa Deals*

## HAYNES SELLS TO STANDARD AND NORTON TO MAGNOLIA

SHREVEPORT.

TWO important deals were closed in the Rodessa field the past week. In one Standard Oil Company of Louisiana purchased all the stock of Haynes Production Company, and in the other, Magnolia Petroleum Company (subject to land title approval) bought a part of R. W. Norton's holdings.

Standard Oil Company of Louisiana formally announced Friday that it had acquired all the Rodessa properties of Haynes Production Company, Inc. The consideration was not announced.

The formal announcement, issued from the office of J. R. McWilliams, vice president and general manager of Standard of Louisiana, said: "The Standard Oil Company of Louisiana through its officers announced that the company has acquired the properties of the Haynes Production Company, Incorporated, in the Rodessa field, through the purchase of all stock in the company."

The purchase does not affect Haynes Oil Corporation and Haynes Drilling Company, both domiciled here but neither of which owns any oil properties in North Louisiana.

The purchase by Standard Oil Company of Louisiana marks its entry into the producing end of the Rodessa field. The purchase, Haynes Company officials said, includes approximately 3500 acres and includes 34 oil wells and one gas well, as well as seven tests now drilling. The acreage centers around Sections 9, 10, 11, 12, 14, 16 and 23, Township 23 north, Range 16 west, and Section 7-23n-15w.

While the consideration in this sale was not announced, it is known that negotiations were carried on recently between Root Petroleum Company and Haynes for a price of $15,000,000, one-third cash and the balance in production.

Haynes Production Company, Inc., is a Louisiana corporation, domiciled in Shreveport, with the following officers, all of Shreveport: W. A. Haynes, president; J. L. Haynes, vice president; Lamar Baker, secretary; and J. B. Haynes, treasurer.

Haynes acquired its Rodessa properties only a few weeks before discovery of oil in that field, its acreage being east of the then producing gas field.

Contract for the sale of 550 acres of his holdings in the Rodessa field, part in Caddo Parish and part in Cass County, Texas, has been signed between R. W. Norton, Shreveport independent operator, and Magnolia Petroleum Company. The contract is subject to property title approval by Magnolia Petroleum Company attorneys. The consideration is reported to be $10,000,000 and a 25 percent overriding royalty on all flowing wells, with a graduated scale downward on all pumping wells. At present all 12 of the wells affected are flowing. The 12 wells have an allowable of 350 barrels per day each.

Dependent on whether some of the acreage is as productive as that already explored, conservative estimates place the ultimate recovery of the land acquired by Magnolia Petroleum Company at 40 million to 60 million barrels. It has been estimated that in the present part of the developed field the ultimate recovery will approximate 30,000 barrels per acre, but this probably will not apply to all the acreage.

Norton did not contract to sell all his holdings in the general Rodessa area, the part sold including his holdings north and northeast of the James Davenport Survey in Cass County. Approximately 1800 acres is on the Louisiana side of the field in Section 17 and 18-23n-15w, Sections 13, 16, 17, 20, and 21-23n-16w. The other 3700 acres are located mainly in the following headright surveys in Cass County: Priscilla Evans, Dudley Gilliam, John Collum, James Young, Alex Archer, John Coleman, J. W. Duncan, Cass County School Lands, William B. Hughes, Wilson Robinson and Robert Trammell.

Norton at one time had as high as 30,000 acres in the territory around Rodessa. After he drilled the discovery gas well at Rodessa in August, 1930, United Gas Public Service Company bought the gas rights on most of this acreage close in but Norton retained the oil rights thereon.

Negotiations with Norton were carried on by J. A. Selby of the land department of Magnolia Petroleum Company in Shreveport.

Magnolia Pipe Line Company recently completed an eight-inch line to the Rodessa field from its trunk near Dixie, Caddo Parish.

## NO TENDER BOARD

### Ickes refuses to set up board at Rodessa

WASHINGTON, D. C.

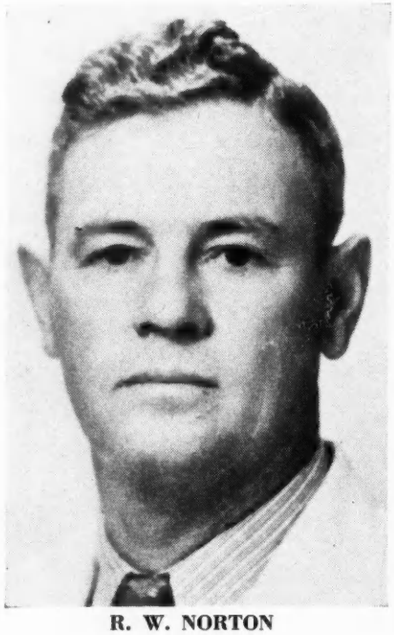
REFUSING to adopt recommendations of oil interests in East Texas for the establishment of a Federal Tender Board for the Rodessa field, Secretary of the Interior Harold L. Ickes this week precipitated a controversary which may have repercussions in the next session of Congress.

The secretary's action was predicated on a report from Director George W. Holland of the Petroleum Conservation Division, who for some time has been engaged in a study of conditions in the Rodessa field, holding that the field is not the potential source of contraband oil which it appeared to be earlier in the year and that the Louisiana authorities appear to have the situation well in hand and have expressed confidence in their ability to control the situation.

The matter of Rodessa oil was brought to the attention of the department some months ago by the Independent Petroleum Association of America and East Texas independent producers, who complained that excess production from the Louisiana field was being dumped in other states.

Some days ago, Senator Connally of Texas, author of the contraband oil act under which the Federal Tender Board in the East Texas field operates, conferred with Secretary Ickes and asked that action be taken to stem the flood of oil from Rodessa, which he had been advised was making a serious situation for the Texas operators, who are working under proration restrictions.

The refusal of the secretary to establish a second tender board, for the Rodessa field, announced April 12, is seen as widening the breach with the senate, caused in part by his efforts to bring about federal control of the oil industry.



R. W. NORTON

## RODESSA SITUATION

### Court action is taken to clarify Texas shipping

TYLER.

DISCLAIMING jurisdiction, the East Texas Federal Tender Board will not interfere with East Texas Pipe Line Company in transporting crude produced in the Rodessa field through the East Texas area on consignment to Tide Water Oil Company. Attorneys for the Rodessa carrier petitioned Federal Judge Randolph Bryant at Sherman on April 11 for an injunction against the tender board in order to clarify its position. The court dismissed the suit without prejudice, but subject to renewal at any time, when Richard Hill, assistant United States attorney general and counsel for the board, testified that shipments of oil interstate from Louisiana through the East Texas field does not require tenders from the body.

East Texas Pipe Line Company has contracted to sell to Tide Water Oil Company 500,000 barrels of crude to be produced from Pelican Oil & Gasoline Company's Sexton property, located in the Louisiana sector of the Rodessa field, at a

price of $1.27 per barrel delivered into buyers storage on the Nettleton tank farm in the East Texas field. The oil is then to be diverted to The Texas-Empire Pipe Line Company for delivery to Port Arthur, thence via tankers to the Atlantic Coast. Deliveries are to be made at rate of 5000 to 6000 barrels daily, according to reports.

Court action was resorted to by East Texas Pipe Line Company because of conflicting opinions given by J. W. Steele, chairman of Federal Petroleum Agency No. 1 Tender Board and J. W. Fitzgerald, legal adviser for the latter body, when asked to rule on an application for a tender for 120,000 barrels of Rodessa crude. Denying the tender, Steele announced "After consideration of the evidence and testimony presented, the board is of the opinion the oil in question is contraband oil as defined by the Connally Act and orders that the tender be rejected." Fitzgerald placed an opposite interpretation when tender application was renewed and ruled that "I believe you (the board) have no jurisdiction on oil originating in Rodessa and moving through this field, but if it stops here, and is refined here, the board has authority to request tenders."

As a safeguard against possible interference by the tender board, East Texas Pipe Line Company erected a 54-car capacity rack about two miles north of Jefferson, Texas, and on the Louisiana, Arkansas & Texas Railroad to make combination pipe line and rail shipments of crude to a tanker terminal near New Orleans. This rack is near Johns Station on the company's Rodessa-Longview eight-inch carrier. The railroad company posted a tariff of 16.8 cents per barrel on crude moving from Jefferson rack to the Louisiana port. The rate from Rodessa to the latter point is about 27 cents per barrel owing to a two-line haul being involved.

Although Pelican Oil & Gasoline Company has a special order issued by Dr. J. A. Shaw, director of the Minerals Division of the Louisiana Conservation Commission, to produce 20,000 barrels daily from its Sexton lease, bearing 13 wells, for 60 days beginning March 24, the company produced at this rate only for four days ending 7 a.m. April 2. Reports indicate that the wells have since been held to the field's allowable of 350 barrels daily per well. Pipe line runs by East Texas Pipe Line Company from the Sexton property during the week ending 7 a.m. April 8 averaged 14,099 barrels daily, according to reports. This included the regular allowable and a portion of the special allowable along with lease storage.

## INTERSTATE MEET

DALLAS.

GOVERNORS E. W. Marland of Oklahoma and James V. Allred of Texas have laid plans for an interstate meeting of oil officials, highway commissions and tax authorities at Dallas for September 28. Governors of the oil producing states have been written asking if they will consent to postponing the next regular Interstate Oil Compact Commission session from July 31 to September 28. If this plan meets agreement, Allred will invite highway and tax commissioners from the same states to hold a meeting in conjunction with the compact commission. Interstate problems will be discussed.

# *City Drilling War*

## OKLAHOMA LEGAL FIGHT OVER ZONING APPARENTLY ENDED

OKLAHOMA CITY.

AFTER the district court began hearing the plea for an injunction to halt drilling on the capitol grounds March 16, the city council voted to throw the capitol grounds and adjoining private property into a drilling zone, which voters will decide May 12. Approval, which is anticipated, would leave the city with no controversy as to the drilling on state lands. The city council voted to include that part of the city east of the Santa Fe tracks, except the wholesale district, the Lincoln Terrace subdivision and grounds around the State Medical Hospital, the Crippled Children's Home, and a block of school land north of the capitol. If owners of homes in Lincoln Terrace show by petition that a majority favor the drilling of the area, it will be included in the voting.

Although Governor E. W. Marland insisted he had not been served in the injunction, he was represented by the attorney general. Judge Ben Arnold said in opening the case that he did not believe his court had authority over the governor. Enlargement of the drilling zone, however, will leave the court no such question to decide.

Leases on 16 tracts of the state lands were awarded April 11 to Sunray Oil Company. The bidder was Knox Garvin, state senator from Stephens County, who filed a letter with his bids to the effect that he was the agent of the company, while officials of the company filed a letter at the time of the bidding to the effect that the senator and top sergeant was its agent Total bonuses of $372,200 and one-fourth royalty was the basis of the bids on these tracts.

One tract went to Anderson Pritchard Oil Corporation, Oklahoma City, for $3055 and a fourth royalty.

Since a period of 10 days is allowed for examination of titles and other details before the leases finally pass to the successful bidder, Garvin is still in charge of drilling on the state lands.

During the week military authority asserted itself when two newspaper photographers were arrested and fined only to have their fines remitted by the military court. Also the question of "what is service" was fixed for the district court, when it convenes to rule on the plea for injunction which the city is seeking to halt drilling on the state leases.

The photographers snapped pictures of drilling operations as well as one of the governor. The arrests were prompt.

Further complications were indicated when the State School Land Commission began preparations to include an additional 320 acres for drilling. This includes a golf course and two small parks. A well now drilling will determine what the state does as to this tract. If it is a producer, bids will be asked as with the lands around the capitol. R. Q. Blakeney, Jr., holder of a preference right lease on part of this land has announced that he will oppose any move for oil leasing by the state.

Home owners of the territory continue in divided camps as to drilling on lands within the city. Each side has an organization. There are even intimations that property owners will go before the grand jury in their effort to bring city officials to zoning additional areas.

Unless the State Corporation Commission takes action to halt gas waste from wells on private property near the capitol, Governor Marland has indicated that he will resort to military authority to bring the gas-oil ratio to proper figures.

The matter of gas waste in the north extension of the Oklahoma City pool came before the Oklahoma Corporation Commission April 15. Engineers were before the group all day and the sum of their testimony was that waste of gas has been exaggerated and that little can be done about conservation of its energy. The tubing of all wells was recommended by C. C. Brown, once with the commission and now with the tax commission.

One recommendation was that a committee of engineers be named to make a detailed study of conditions and report back.

C. V. Sidwell, superintendent of production for British-American Oil Company testified that bottom-hole pressures have dropped from 575 to 480 pounds and that the best gas-oil ratio he had found occurred with wells flowing at capacity due to free gas in the sand. He said wells would not flow through tubing. He favored a study by engineers.

John Hayward, chief engineer of Barnsdall Oil Company recommended doubling of the allowable to reduce the ratio.

Governor Marland appeared before the commission prior to the start of the hearing and hinted at an extension of the military zone over private property unless the gas-oil ratio is reduced.

## HIGH ALLOWABLE

### Texas May output is set at 1,165,955 barrels

AUSTIN, TEXAS.

THE Texas Railroad Commission issued an order last Friday fixing an allowable of 1,165,955 barrels per day, effective May 1. The order provided increases for all districts of the state except East Texas.

East Texas was reduced about 6,000 barrels a day. The order provides that wells shall be allowed to produce 2.78 percent of their hourly potential. They had been permitted to produce 2.85 percent for the past two months. The commission estimated that this would result in an allowable of 440,000 barrels per day on May 1.

The new allowable fixed for the state

is 26,955 barrels higher than the consumer demand for Texas oil as determined by the United States Bureau of Mines. At the hearing last Thursday, Commission Chairman Ernest O. Thompson stated that commission records indicated production usually amounted to only 98 percent of the allowable fixed by the orders. On this basis, it would appear that while the allowable is fixed at 1,165,955 barrels per day, production would amount to 1,142,636 barrels or 2 percent less than the order allows.

The May allowable is 18,265 barrels above the allowable fixed by the commission in an order issued on March 24, which became effective on April 1. At the hearing Thursday, the commission announced that the allowable on April 15 had increased from April 1 until it had reached 1,173,767 barrels per dav, which is 7812 barrels above the figure provided in the order issued Friday. Changes by districts were as follows:

East Texas cut 4200 barrels to 440,000 barrels.

Rodessa increased 550 barrels to 1750 barrels.

East Central Texas raised 1811 to 52,761 barrels.

South Texas increased 6700 barrels to 149,963 barrels.

The Gulf Coast was raised 6278 barrels to 185,312 barrels.

West Central Texas was increased 798 barrels to 53,806 barrels.

West Texas was increased 5157 barrels to 158,563 barrels. North Texas remained at 60,000; Panhandle at 60,800.

The largest increase for any one field was a 3300-barrel raise for Iatan-East Howard which brought the allowable there to 8100 barrels per day. Van was increased 2000 barrels to 37,733 barrels per day. The allowable for the North Ward field was cut 2000 barrels to 8097 barrels, and the same amount was added to the South Ward field, raising the allowable there to 16,170 barrels.

Placedo in South Texas was raised 625 barrels to 2675 barrels. Loma Novia was increased 1299 barrels to 13,269 barrels. The commission removed the new Saxet field from the schedule. Instead, an allowable of 4617 for the deep sand in the New Saxet field was fixed, and an allowable of 2659 barrels for the shallow sand was provided. The total allowable assigned to the two fields was 7276 barrels, or 1096 barrels more than the New Saxet allowable in the order effective April 1.

Increases in allocations made to Gulf Coast fields resulted from increased drilling in new areas. Anahuac was raised 900 barrels to 6800 barrels. Hastings was increased 500 barrels to 6400 barrels. Pickett Ridge was increased 750 barrels to 1890 barrels. South Houston was raised 750 barrels to 2175 barrels per day.

In West Texas, two new fields were added to the schedule. An allowable of 100 barrels was assigned to Henderson, and allowance of 150 barrels was allocated to Bennett.

The allowable for Talco was fixed at 300 barrels.

In the Gulf Coast, Hamman (Bay City), with an allowance of 155 barrels, and Gillock, with an allowance of 150 barrels, were added to the schedule. The changes in other fields were relatively small.

# Good Coast Session

## CALIFORNIANS ELECT SILENT A. P. I. DIVISION CHAIRMAN

LOS ANGELES.

ROY SILENT, Petroleum Securities Company, of Los Angeles, was elected chairman of the Pacific Coast district, Division of Production, American Petroleum Institute, at the annual meeting held April 14, succeeding Bruce Barkis, who served the past year. Other officers elected include L. L. Aubert, Los Angeles, vice chairman for Los Angeles Basin; W. L. Bagby, Ventura, vice chairman, Coastal District; Lloyd Williamson, of Fellows, vice chairman, San Joaquin Valley area; W. G. Corey of Los Angeles, treasurer, and D. L. Kilgour of Los Angeles, secretary.

At the dinner, Col. F. E. Foster, manager of the Pacific Coast Region, American Petroleum Industries Committee, and managing director of the California Oil & Gas Association, discussed the growing tax evil, citing figures on the mounting taxes against all branches of the oil industry in the United States. His remarks were for the nation, rather than for California, saying taxes amount to about $1.14 a barrel per barrel of crude produced. He said the oil industry does not wish to shirk its just part of the tax burden, but he does feel that more than a billion dollars a year is too much, and further taxes should be combatted. He gave other figures previously printed from time to time.

Judge Leon R. Yankwich of the United States District Court, Southern California, discussed "The Courts and the Changing Industrial Scene." He has presided at several very important oil cases the past several years and showed a grasp of the facts and problems of the oil industry. He expressed the view that the problems of the industry will not be solved until a comprehensive system of federal regulation is devised, and gave reasons for this conclusion.

The technical sessions were held during the morning and afternoon at the Edison auditorium, with more than 500 present at both sessions.

At the morning session, H. E. Winter, Union Oil Company, presided as chairman. R. S. Southworth, Columbia Steel Company, read a paper on Casing Lines and he was followed by Roy Silent, Petroleum Securities Company, who discussed Circulation Problems, going into details as to pressures, muds, or drillling fluids, and other details, giving instances gained from experiences at Kettleman Hills.

J. E. Brantley, of Drilling and Exploration Company, drilling contractors, discussed Rotary Drilling Practice. He has had some very varied experiences at Kettleman Hills in recent years and prior to that he operated in the Mid-Continent and in South America.

At the afternoon session, Bruce Robinson, General Petroleum Corporation, presided as chairman. The first speaker was D. G. Kingham, General Petroleum Corporation, who discussed the Application of Multiple Gas Engines. He was followed by Wendell M. Jones, Petroleum Equipment Company, who read a paper on Individual Well Servicing Units, which had been prepared by himself in cooperation with R. E. Gignoux of Hopper Machine Works. He discussed motive power, showing slides to illustrate various units suitable to various duties, movability, etc.

Practical Value of Sub-Surface Pressure Surveys was the title of the paper read by W. H. Osgood, consulting engineer. He was followed by D. H. Fortune, Barnsdall Oil Company, who discussed Oil Treating Methods, showing slides and giving examples of what had been done with crudes of various cuts and gravities. He described both electrical and chemical treatments and methods used in various situations, slides illustrating every step of each procedure.

**Any American individual failing to express an honest opinion on matters affecting our national welfare fails in his duty to himself and his country.**

★

The other day we read an article on government written by a former communist.

The author of the article in effect said that she became a communist because she was looking for that "larger freedom" which she thought she would find in communism. A close-up study of communism by her in Russia showed her that this "larger freedom" was achieved by giving up many of those personal liberties to which Americans have become so accustomed that they can't appreciate them. Her conclusion was that having seen these individual liberties taken away she realized that they meant more to her and to the average American than any possible Chimerical gain coming through communism.

The first steps toward the destruction of these individual liberties may be found in endeavors to take away from those who have and give to those not having them.

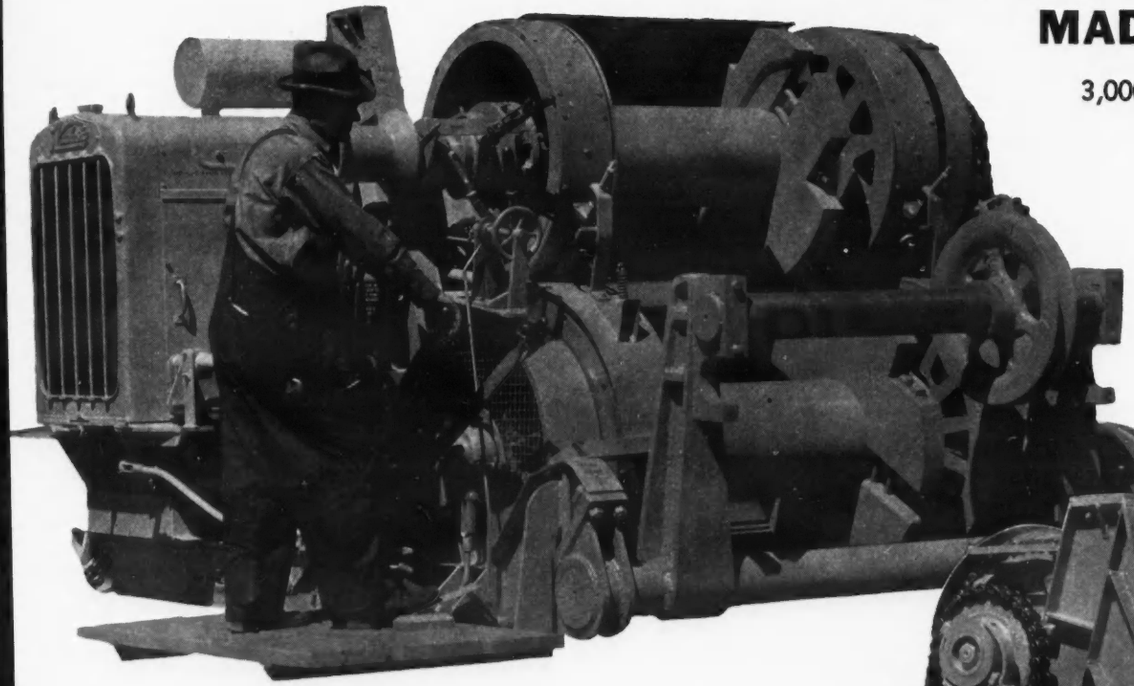
# *High Speed* OIL WELL SERVICING UNITS

CUT YOUR WELL SERVICING COSTS

## BOTH DRUMS FRICTION DRIVE

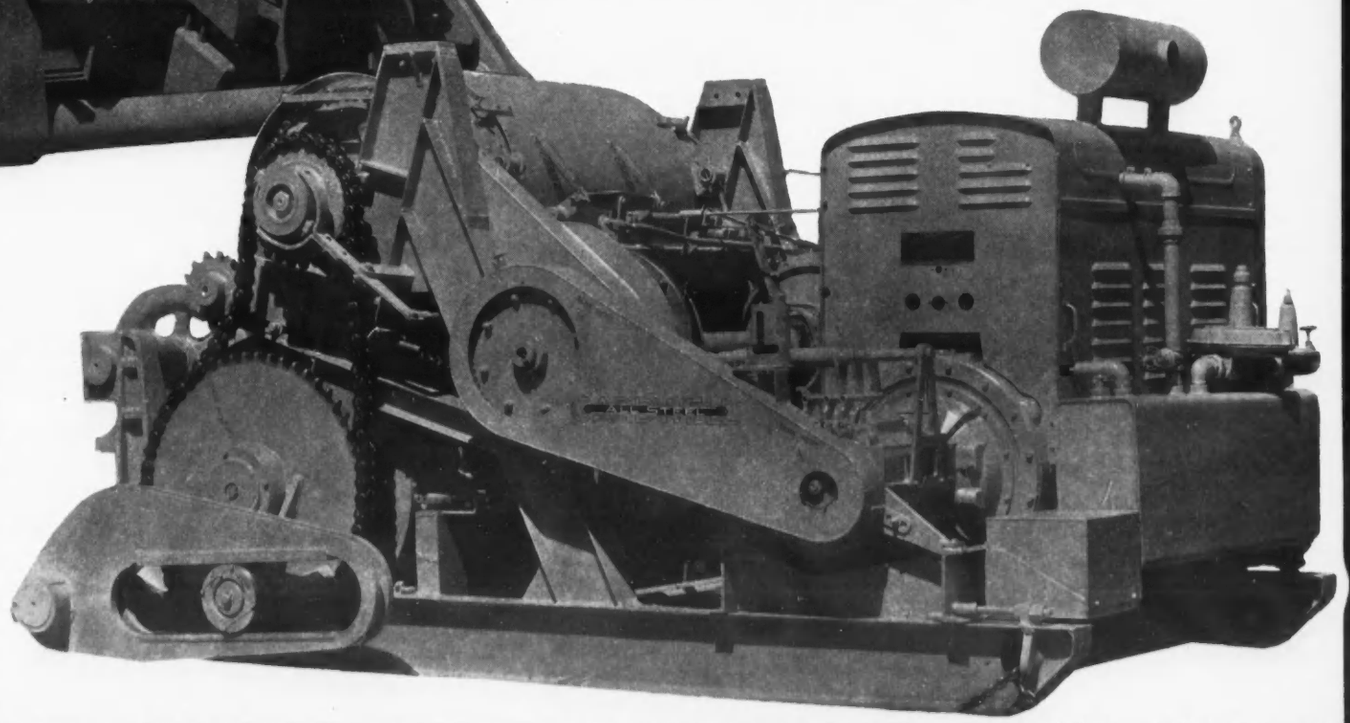
### MADE IN THREE SIZES for well depths

3,000 Ft. Model HL  4,500 Ft. Model KL  6,500 Ft. Model RL



## SPECIFICATIONS

**Both drums friction driven from countershaft.**
**Alloy steel heat treated wearing parts.**
**Friction Clutch brakes operate automatically.**
**Free rolling, Timken bearing drums.**
**Self-aligning SKF countershaft bearings.**
**Heat treated alloy steel brake flanges—demountable.**
**Easily operated controls.**
**Rotary Drive Sprocket or Spudding Attachment for either rotary or standard tool servicing.**
**Light weight for economical and fast transporting.**



CARDWELL ALLSTEEL TRADE MARK

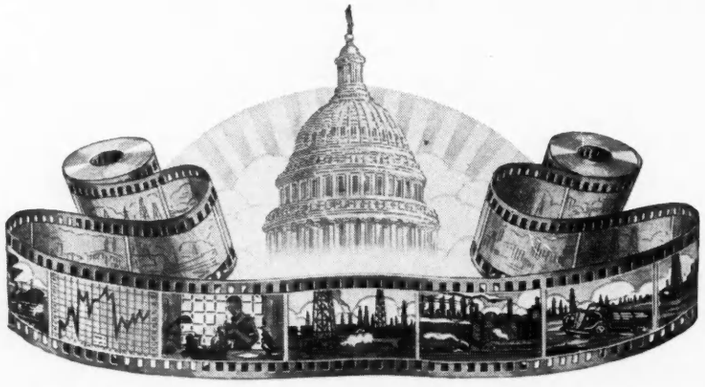
**ALLSTEEL PRODUCTS MFG. CO.**

Wichita, Kansas, U. S. A.

801 So. Wichita St., P. O. Drawer 2001

CABLE ADDRESS "ALLSTEEL" PHONES L. D. 289, LOCAL 4-4381—4-4389

# The Changing Panorama



THE OIL WEEKLY'S COMPOSITE VIEW OF INDUSTRY

Edited by L. J. LOGAN, Associate Editor

THE current picture in oil is a shade brighter than that witnessed a week ago. Milder weather has caused a strengthening of the gasoline markets, and retail prices have been increased on the West Coast and in the Chicago area.

The crude oil markets appear stronger also, because of the better gasoline situation and a lessening of the anxiety over control of the Rodessa field.

### Retail Gasoline Prices Higher

Regular and premium grades of gasoline were raised one half cent a gallon by the large marketers in the Chicago area April 15, being brought nearer the level regarded as normal. Third grade remained at 13½ cents, including taxes. This advance reflected a better demand for gasoline, with milder weather prevailing.

Major companies on the West Coast raised retail prices on all grades of gasoline two cents a gallon throughout the Pacific Coast region April 13. This was the second advance in recent weeks, and restored prices to the levels that prevailed before the markets of the territory were demoralized about a year ago. Opinion was divided as to whether or not the new prices would stick. Some thought the independents would soon follow. Others regarded the increase as a mistake, pointing out that the previous raise had not yet been met by many independent concerns.

Improvement has occurred also in the retail markets in Texas. Following brisk Easter business, independents in the Houston area raised third grade from 11 to 15 cents a gallon, inclusive of taxes. As in the case of the California advance, however, there was considerable doubt that the better prices could be held.

By virtue of the milder weather and better demand and the improved retail markets, the gasoline tank car markets throughout the Mid-Continent have become stronger. Prices remained unchanged late last week, but they were appreciably steadier.

### Less Anxiety Over Rodessa

Much of the clamor over the Rodessa market threat has subsided. All wells in the field now are restricted under state regulations and an executive order of the governor of Louisiana to 350 barrels daily, including the wells that produced for five days under the special higher allowables. The governor's special order had the effect of cancelling the special allowables granted by the conservation department. The field thus far has a total allowable of somewhat over 45,000 barrels daily, some new wells having been completed in the first half of this month.

The state authorities assert that the field is under effective control. Federal agents have concurred to the extent of recommending to Secretary Ickes that no move be made at present toward inaugurating a federal tender system for the area, as in East Texas, for bolstering the state control.

### Field Still Remains a Threat

Despite all the reassurances, however, the industry still hears that there are some big crude leaks at Rodessa; that the restrictions are being circumvented through various schemes. If there are grounds for some of these reports, it should not be surprising. Many schemes were worked with at least temporary success in East Texas, before enforcement reached its present high degree of success. Rodessa control is young, and in maturing it likely will exhibit various weaknesses.

Meanwhile, the industry is hoping that it will have the continued cooperation of the Louisiana conservation authorities. With them rests the primary power to keep Rodessa within safe bounds.

### Rodessa Deals Draw Attention

As is often the case when a large oil field is opened, considerable proven acreage at Rodessa likely will pass from the hands of independent operators into those of larger companies. Some properties already have changed hands, and rumors are going around currently about various big deals pending. The completed deals have shown what certain purchasers were willing to pay for the Rodessa acreage, and the deals that are reported pending would more definitely establish going prices for properties in the field.

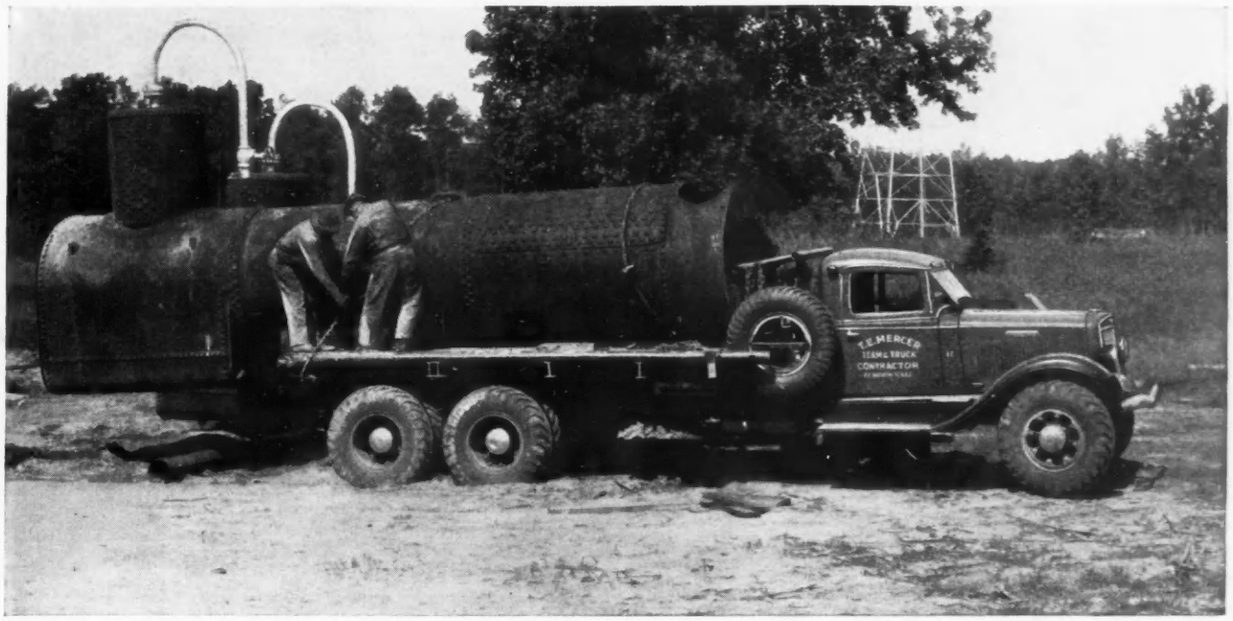
These deals and rumors of deals have many pencil experts busy, passing judgment on the shrewdness of the actual and prospective buyers and sellers.

One of the intriguing factors that these experts

# *Strength and Quality*

## *in Big Six-Wheeler and Half-Ton*

# INTERNATIONALS




*International Model C-55-F dual-drive six-wheeler. There are four models of the dual-drive type and seven of the trailing-axle type in the International line. Two of the trailing-axle type are available with two-speed rear axles.*

**MANY of the toughest hauling assignments in the world fall to *International* Six-Wheel Trucks. The user knows from experience that he can count on Internationals for power, stamina, and economy. He knows that International service will keep them on the job. Whatever his work, he feels *safe* with Internationals.**

**No matter what your hauling requirements, *any* International will give you *heavy-duty stamina in proportion.* There is *extra* all-truck value in all the 26 International models, down to the Half-Ton chassis priced at $400 f.o.b. factory.**

**Write for the 32-page catalog on the International Six-Wheelers—the Half-Ton unit—or information on any intermediate size. The nearest Company-owned branch or International dealer is at your service.**

**INTERNATIONAL HARVESTER COMPANY**

606 So. Michigan Ave. *(Incorporated)* Chicago, Illinois

# INTERNATIONAL TRUCKS

quickly run into is the future price of oil. When a company buys oil in its natural reservoir, it must estimate not only the amount that is recoverable, but also the average price that will prevail when and as the oil is produced over a period of possibly 15 or 20 years, or more.

### Hope for Higher Oil Prices Indicated

On some Rodessa deals already made or said to be contemplated, the pencil artists are figuring that the purchasers will be paying around $1 a barrel for each barrel put into steel storage for their own account. That is about the same price that purchasers currently are paying for Rodessa crude produced by others. With the present prices prevailing, the purchasers thus would be paying the same for the oil from the acquired leases as if the oil were bought from outsiders.

A conclusion reached by the pencil experts is that the purchasers must be bullish on the future prices of oil; that the purchasers must be expecting the next 20 years or so to afford higher average prices than those now prevailing.

The only other explanation they can offer is that individual purchasers are particularly optimistic on the ultimate recovery of oil at Rodessa. However, there seems to be rather wide agreement that the Rodessa recovery will vary from 10,000 to 35,000 barrels per acre, depending on the location of the tract, and that the average for the field is likely to be somewhere around 20,000 barrels per acre. With the recovery so calculated, the price still figures out around the $1 price on some of the deals. Therefore, the purchases are seen as rather conclusive evidence of the bullishness on future crude prices.

### History Points to Better Postings

Whatever the lease buying companies expect of the crude markets in the future, they apparently would be justified in predicting an average price of more than $1 a barrel over a 20-year period. They possibly can count rather confidently on an average price of $1.25 a barrel, and it would not be outside the bounds of reason to figure on an average price of $1.40 or $1.50 a barrel.

These statements are based primarily on the history of crude oil prices in the past, particularly within the past 20 years. Since the industry started in 1859 with an average price of $20 a barrel, the average price at the well has been $1.24 a barrel.

But the early history of the industry was the history of kerosene, and about 20 years ago came the beginning of the automobile era and large scale gasoline consumption. In the automobile age the average price of crude has been somewhat better. For the past 20 years, that is, from 1916 to 1935, inclusive, the average price has been $1.43 a barrel.

### Price Rarely Under Dollar

In those past 20 years the average price always was $1 a barrel or more except in the three years 1931, 1932, and 1933, when the industry was burdened at the same time by the severest depression of many years and the greatest flush oil field ever discovered. Under those depressing circumstances, crude prices averaged 65 cents a barrel in 1931, 87 cents in 1932, and 67 cents in 1933. The average was up to $1 in 1934 and 1935, and it has been still higher in the early part of this year. Without much doubt, the rising trend will continue at least for several years.

Consequently, a purchaser appears to be making a fairly safe commitment in contracting for a long term supply of oil at $1 a barrel.

### History Possibly Will Repeat Itself

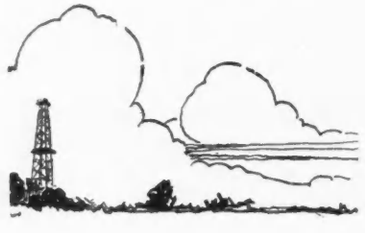
There is no definite assurance, of course, that the next 20 years will bring a repetition of the past 20. But the forces that ordinarily make history repeat itself are at work in this case. On the one hand, the price may tend to be held down by technological advancements. Geophysics and other factors have facilitated discovery of new fields, and at times in recent years discoveries have exceeded requirements, tending to depress prices. On the other hand, proration and other forms of control have been instituted, preventing flooding of the markets; and each new field opened means that there is one less field to be found. Furthermore, consumption of petroleum is confidently expected to grow larger and larger in the next 20 years. The American Petroleum Institute has estimated that by 1960 the number of automobiles and trucks will increase 43 percent over the 26,000,000 registered in 1935, rising to a total of 37,100,000.

### Wide Range in Past 20 Years

During the past 20 years the average price of crude oil has varied rather widely, ranging from the 65-cent low of 1931 up to $3.07 in 1920. By years, the average prices have been as follows:

| Year | Average at Well | Year | Average at Well |
|---|---|---|---|
| 1916 | $1.10 | 1926 | $1.88 |
| 1917 | 1.56 | 1927 | 1.30 |
| 1918 | 1.98 | 1928 | 1.17 |
| 1919 | 2.01 | 1929 | 1.27 |
| 1920 | 3.07 | 1930 | 1.19 |
| 1921 | 1.73 | 1931 | .65 |
| 1922 | 1.61 | 1932 | .87 |
| 1923 | 1.34 | 1933 | .67 |
| 1924 | 1.43 | 1934 | 1.00 |
| 1925 | 1.68 | 1935 | 1.00 |

Although the average price of crude has been $1.24 for the whole history of the industry, there were some wide fluctuations, particularly in the first 15 years of the period. From $20 a barrel in 1859 the average dropped to $9.60 in 1860 and to 52 cents in 1861. It rose back to $8.15 in 1864, and again declined. In the 38 years, 1878-1915, the average price was less than $1 a barrel in all but 5 years. However, in all the industry's history, the average price never has been less than the 51 cents of 1892.



# GEARED POWERS

## UNIFORM DESIGN

50 H.P. — 100 H.P.

**Not an adaptation but a specifically designed geared power with forged rotating shaft, single crank, roller bearing equipped, and gear driven fully enclosed oiling system.**

THE NATIONAL SUPPLY COMPANY

NSCO
"REG. U. S. PAT. OFF."

National

# PRACTICAL—DEPENDABLE

1 BAKER CEMENT FLOAT SHOE
2 BAKER CEMENT FLOAT COLLAR
3 BAKER CEMENT WHIRLER SHOE
4 BAKER CEMENT GUIDE SHOE
5 BAKER MODEL F CEMENT RETAINER

**Baker Oil Tools have been developed through the years not only to meet the existing needs of the Oil Industry, but to anticipate future requirements. They have been proved by world-wide use to be Practical, Dependable & Safe. They will make your operations more profitable!**

**1**

With the adoption of "red" concrete as standard, Baker Cement Float Shoes provide maximum efficiency. The Bakelite ball valve double-seals against rubber backed by Bakelite at the slightest reversal of pressure; the special made shoe, with plug and valve made of Bakelite and Baker-formula concrete, is stronger than the casing; the complete "drillability" of both concrete and Bakelite eliminates any delay or danger when drilling out and drilling up — absence of metal leaves the hole always ready for immediate coring or "straight-hole" drilling.

**2**

Many operators use a Baker Cement Float Collar to stop the cementing plug a joint or two above bottom and retain cement "tailings" *inside* the casing. Internal construction is the same as the Baker Cement Float Shoe, and all advantages are retained. Used with a Baker Cement Guide Shoe for average length strings, or with a Baker Cement Float Shoe where an extra measure of safety is desirable.

**3**

More and more operators are adopting the Baker Cement Whirler Shoe as the "ultimate" device of its kind. It includes all the features of efficiency and safety present in the Baker Cement Float Shoe, with a "plus value"! A number baffled side ports lead out from the valve chamber and serve to direct the cement upward with a whirling motion that insures complete, even distribution around the casing and minimizes danger of channeling.

**4**

Baker Cement Guide Shoes possess the vital Baker Drillability feature, and are used in combination with Baker Cement Float Collars, described above.

**5**

The Baker Model F Cement Retainer with Circulation Jar provides for the placement of cement in a well, under pressure, through tubing or drill pipe. Particularly adaptable where circulation cannot be secured, or can be broken only under great pressure; also used as

**BAKER**

# & SAFE!

a Casing Bridge Plug. This efficient device is applied for Re-Cementing, Series Cementing, Cementing Behind Sections of Pipe, Plugging off Bottom Water or Plugging Back to Upper Zones, and other uses.

**6**

Baker Rotary Wall Scrapers are being universally used for (a) scraping rotary mud from the productive sand for bringing in a bigger well easily and in less time; (b) enlarging the hole to permit placing of a thicker body of cement around shoe and casing; (c) wall-scraping a larger diameter for setting casing in "tight" holes, or running liners without turning down couplings; and many other purposes. The blades are opened by hydraulic pressure from the pumps, and always close when their work is done — thus providing maximum safety.

**7**

The advantages of a back-pressure valve in the drilling string are well known, but not until the "threadless valve" was introduced in the Bakwik Drill Pipe Float were operators unanimous in approving such devices. The Bakwik Float body need not be removed from the string at any time, as the valve assembly is quickly and easily removed or replaced by hand. Its many advantages are described in the Baker Catalog, and on Pages 205 to 207 of the 1936 Composite Catalog.

**8**

The Baker Rotary Wall Sampler takes *cores from the side walls* of a drilled hole, operating at any depth in a safe and efficient manner. The complete Wall Sampler is a "double value" investment, since the body is identical to the Baker Rotary Wall Scraper and by *changing blades only* you can perform the many profitable operations described under Paragraph 6 above.

**9**

The Baker Cable Tool Core Barrel is unequalled for taking cores from all formations by the cable tool method. Accurate, complete cores are secured at low cost, and any experienced driller can operate it successfully.

*General Offices and Plant*

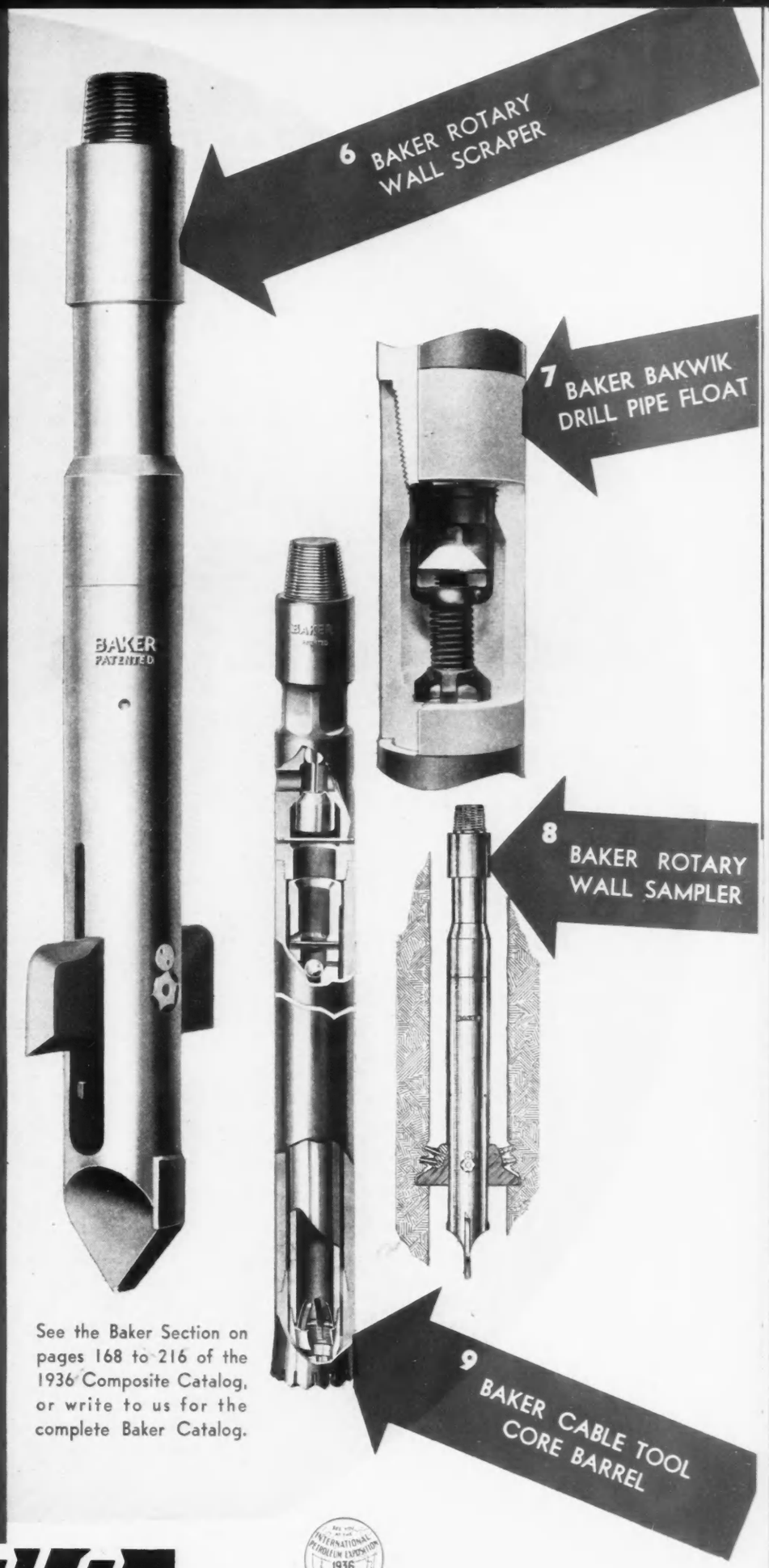
**BAKER OIL TOOLS, INC.**

2159 East Slauson Ave.
*Mail Address: Box 71*
Huntington Park, California

*A new, modern factory, warehouse and office now nearing completion at—*
HOUSTON, TEXAS

*Sales Office and Warehouse at—*
Tulsa

*Sales offices at:*
Shreveport; Midland, Texas; Oklahoma City; New York City; Coalinga, Taft and Bakersfield, California


6 BAKER ROTARY WALL SCRAPER
7 BAKER BAKWIK DRILL PIPE FLOAT
8 BAKER ROTARY WALL SAMPLER
9 BAKER CABLE TOOL CORE BARREL
BAKER
PATENTED

See the Baker Section on pages 168 to 216 of the 1936 Composite Catalog, or write to us for the complete Baker Catalog.

INTERNATIONAL PETROLEUM EXPOSITION 1936
WORLDS FAIR OF PETROLEUM TULSA, U.S.A.

**OIL TOOLS**

# MEN IN THE INDUSTRY'S NEWS

**GEORGE WITTMER III** of The Wittmer Company, Pittsburgh, was elected president of Ohio Independent Gas Producers' Association at the annual meeting held in Columbus on April 9. Robert Lewis of Rochester, N. Y., and Barnesville, Ohio, was elected vice president. Philip N. Faine of New Straitsville, Ohio, was re-elected secretary. Wittmer succeeds C. F. Speary of Marietta, Ohio, while Lewis replaces W. L. Franks of Logan, Ohio.

**L. H. J. HERSCH,** petroleum engineer with Caribbean Petroleum Company, arrived in New York recently enroute London and The Hague from South America.

**H. D. "DAVE" COLLINS,** production engineer for Gulf Oil Corporation (Gypsy Division), is to be married on June 1, to Miss Margaret Spang, daughter of F. J. Spang, president of Spang and Company, Bulter, Pennsylvania, where the marriage is to take place. Collins came with the Gypsy organization in 1925, spending the first year in the field and the remaining 10 years in company headquarters at Tulsa. He has been active in affairs of the various engineering societies.

**PAT McDONALD** and J. A. Deffeyes, production engineers for Indian Territory Illuminating Oil Company, explained the methods of using bottom-hole pressure bombs and the interpretation and use of pressure data in the monthly meeting of the Oklahoma City Chapter, Production Division of the American Petroleum Institute on Wednesday evening, April 15, at the Biltmore Hotel. C. E. Wright district engineer for I.T.I.O. Company was in charge of the program.

**BRUCE C. CLARDY,** who has been crude oil representative in the Gulf Coast for Shell Petroleum Corporation, has resigned to join Heyser & Heard, Dallas independent operators and contractors. The change was effective April 15. Clardy, an engineer, was associated with the Texas Railroad Commission for several years prior to joining Shell Petroleum Corporation. The firm will henceforth be known as Heyser, Heard & Clardy.

**V. V. POLIAKOV,** vice president and chief engineer of Glavneft; N. V. Samostrelov, vice president and chief engineer of Bashneft; I. F. Korneekov, vice president and chief engineer of Maineft; and B. D. Dyrtchenko, vice president and chief engineer of Grozneft are visiting oil fields of the United States. After a tour lasting three or four months they will return to Russia.

**RICHARD ATKINSON,** formerly production engineer in the Oklahoma City district of Phillips Petroleum Company and more recently production superintendent for that company in eastern Kansas, has been transferred to the Burbank area of Osage County to take charge of production. Robert Jolly has been transferred from Shidler to Wichita, Kansas, to succeed Atkinson in the eastern Kansas district.

**R. D. CRITZ** has succeeded Bruce C. Clardy as crude oil representative in the Gulf Coast for Shell Petroleum Corporation. Clardy resigned to engage in business for himself.

**BILL BOYD** of New York, executive vice president of the American Petroleum Institute, was the guest of honor at a barbecue given by George Hill, president of Houston Oil Company, in Houston Tuesday evening. About 60 guests were present.

**M. "BINK" MANNING** has resigned as vice president and director of Sterling Oil & Refining Company, and also as vice president of Houston Oil Field Material Company. He has disposed of his interest in the latter concern.

**FRANK H. DUNN,** newly elected executive vice president of the H. F. Wilcox Oil & Gas Company, came to the Mid-Continent area in 1919 from his native state of Massachusetts and worked in the

**FRANK H. DUNN**

field four years before coming to Tulsa to act as purchasing agent. During the past six years he has devoted most of his time to refining, serving as assistant to the general superintendent and as vice president in charge of refining.

**JOHN F. EATON,** sales engineer in the Tulsa division of Jarecki Manufacturing Company, is to be married on Sunday, April 26, in Tulsa, to Miss Mary Chapin, who formerly served in the purchasing department of Stanolind Oil & Gas Company in Tulsa.

**C. O. RISON,** superintendent for Indian Territory Illuminating Oil Company with headquarters in Oklahoma City, will appear as the principal speaker on the May 15 program of the Tulsa Chapter, Production Division of the American Petroleum Institute. The subject upon which an open forum is to be held, is, "The Use of Explosives in the Oil Industry." Rison was formerly expert driller for the United States Bureau of Mines and previously had been a manufacturer and user of nitroglycerine.

**LOUIS BERRY,** Apex-Trinidad Oilfields, Ltd., Trinidad, British West Indies, accompanied by Mrs. Berry and two children, is spending a three-month vacation in the United States. Berry reports considerable oil activity on the island. The Berrys are visiting in the home of W. F. Bowman of Houston, geologist with Tide Water Oil Company.

**GEORGE SAWTELLE,** president and general manager of Kirby Petroleum Company, was the principal speaker at the weekly meeting of the Houston Geological Society April 16, discussing salt dome statistics.

**CHARLES W. TURNER** of Wichita, Kansas, is a recent addition to the field engineering staff of the S. M. Jones Company with headquarters in Tulsa. Turner was educated at the University of Oklahoma and Kansas State Agricultural College.

**J. A. WALES** of Montreal, Canada, vice president of McColl-Frontenac Oil Company, arrived in Houston last week from Trinidad, British West Indies, where he inspected properties of his company. Enroute Montreal, Wales will stop in East Texas to visit the gathering line system of McColl-Frontenac Oil Company.

**SIR HENRI DETERDING** celebrated his seventieth birthday April 19. It also marked his fortieth year with the Royal-Dutch Shell companies.

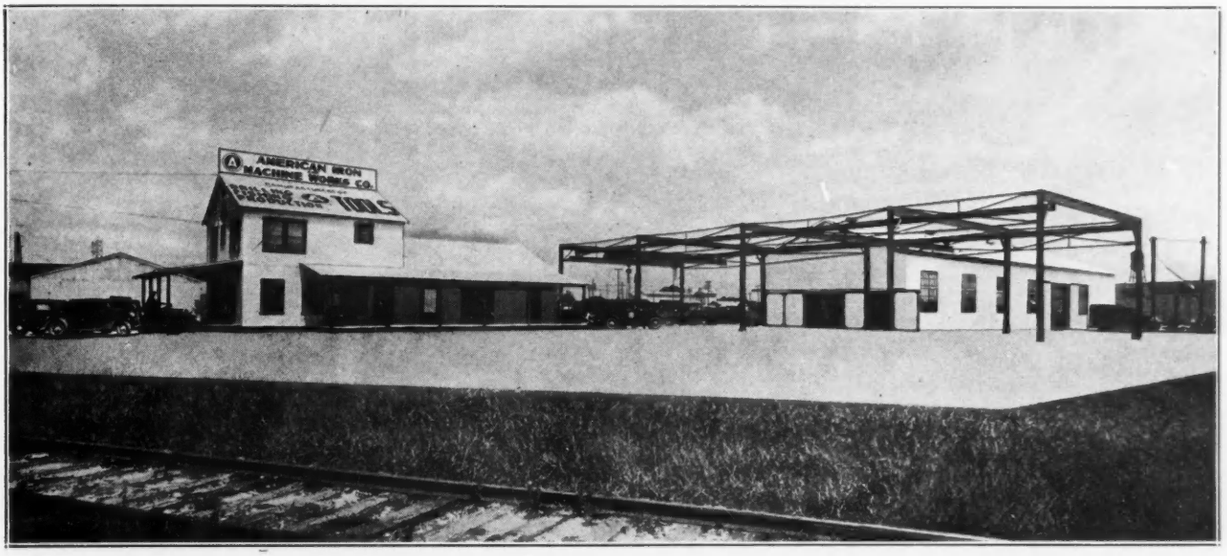
**B. R. EMRICK,** former technical director for Burmah Oil Company, Limited, resigned his position in Burma after 26 years service and recently returned to New York with Sam, his well known dog. Both proceeded to Hot Springs, Arkansas, for a vacation.

**FRANKLIN F. LOVERING** is a recent addition to the petroleum engineering staff of Phillips Petroleum Company in the Oklahoma City district.

**J. EDGAR PEW,** vice president of Sun Oil Company, accompanied by Mrs. Pew, is on a cruise along the West Coast of South America. They expect to return to the States toward the close of April.

**LOUIS D. JURS,** a director of Associated Oil Company and vice president of the Enginering, Transportation and Supplies Division, was honored this month by fellow executives and employes at a surprise party at the Transportation Club, San Francisco, on the occasion of completion of 25 years of service with the company. Jurs was presented with a handsome bound book, containing the signatures of every employe in his division. This tribute was presented to Jurs by H. T. Earl, assistant vice president of Associated Oil Company. The book contained 1064 signatures of employes of the Automotive, Building, Engineering, Granberg Meter Corporation, Marine, Pipe Line, Purchasing, Telephone and Telegraph, Traffic and Transportation departments. Jurs joined Associated Oil Company in 1911 as draftsman and was successively promoted to chief draftsman, assistant chief engineer, chief engineer, and in 1927 was made vice president.

# THANKS A MILLION...




## FOR HELPING MAKE OUR TWO YEARS IN HOUSTON AND GULF COAST A SUCCESS

We sincerely appreciate the patronage of our many customers in the Gulf Coast area, who have placed their business with us with full confidence that we had exactly the equipment and service they needed.

When in Houston be sure to come in and pay us a visit. See our plant in operation, and the precision required in giving our customers service 24 hours a day, seven days a week. Service built our business—There is quality in everything we make. You can always depend on American Iron & Machine Works Company with the assurance that you will get the best equipment and service available in the oil industry.

**OPEN DAY**
**AND NIGHT**
**7 DAYS A WEEK**
***at 2205 Quitman***

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936
9TH WORLD'S FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 16 TO 23

**AMERICAN IRON & MACHINE WORKS CO.**

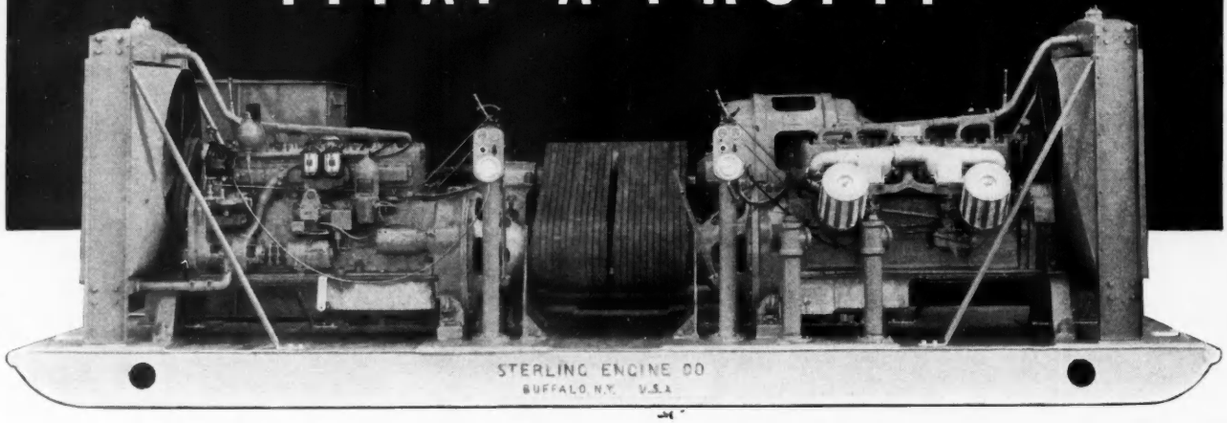
HOUSTON, TEXAS
KILGORE, TEXAS

OKLAHOMA CITY
OKLAHOMA

SEMINOLE, OKLA.
FITTSTOWN, OKLA.

Export Office: 420 Lexington Ave., New York City

# MEETS TODAY'S DRILLING CONDITIONS ...AT A PROFIT




This Sterling Portable, Self-Contained, Butane Electric Drilling Rig has two Sterling Petrel, 6-cylinder, 5¼ x 6, Combination Butane - Gas - Gasoline Engines equipped with Twin Disc No. 7243 heavy duty, gear Tooth Drive Type Power Take-Offs, especially developed by Twin Disc engineers for oil field installations.

"It is necessary to provide clutches on the Sterling outfit for two reasons," says M. E. Mutchler, General Sales Manager of the Sterling Engine Company. "First: to enable each engine to be started, disconnected from the load; second: to permit the unit to operate from the power of one engine—and the Twin Disc Clutch performs these functions admirably. Twin Disc Clutches are presented in a housing suitable for adaption to an engine, and facilitating the attachment.

"The Sterling unit has drilled several wells, and latest reports are that the clutches are working satisfactorily. The work is very hard; and the load changes are frequent, and at certain times one engine is operated while the other is idle, necessitating that the clutch on the idle engine remain in neutral, hitherto a rather difficult thing to accomplish with a friction clutch.

"We have been using Twin Disc Clutches for a number of years, and while we know there are other clutches on the market, the service has been so satisfactory and the Twin Disc policy so ethical that we have not looked elsewhere."

*Write* for specific recommendations. Engineering data on request. ***Twin Disc Clutch Company, 1336 Racine St., Racine, Wisconsin.***

*Twin Disc No. 7243 G.T. Power Take-Off Unit.*

TWIN DISC CLUTCHES

## CONTROL METHODS FOR HANDLING

# *Gas-Lift Operations*

## ARE STRICTLY SCIENTIFIC STUDIES

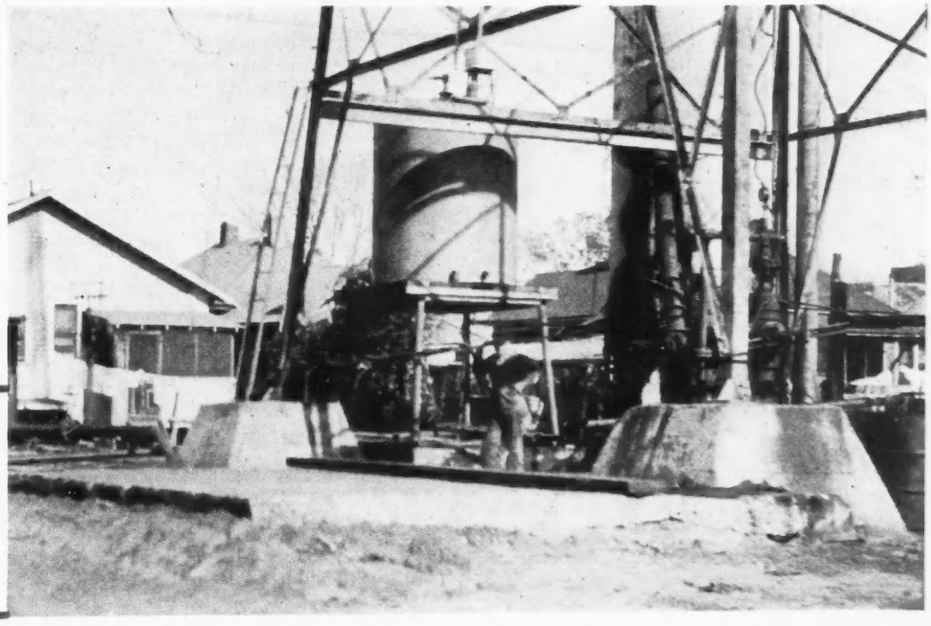
By S. F. SHAW, Consulting Engineer
San Antonio, Texas

THE years 1936 and 1937 bid fair to make necessary the use of lifting methods that are capable of handling large production. Depletion of major flush fields, inability at present to find a sufficient number of new pools to keep pace with consumption, and increase in the demand for oil products, would seem to make it necessary to step up production in the pools already producing. Moreover, greater depths are now prevailing in the discovery of new production, and this requires a revision of the older practices in order to obtain the maximum production.

The gas-lift method, with its various modifications, is capable of lifting large quantities of oil from great depths at low cost per barrel if the method is handled in the proper manner. However, much of the knowledge that was gained when employing this method in 1926-1930, when there was a demand for the maximum production, has been dissipated during the depression through breaking up of engineering organizations employed by the various oil companies. Work of this character has continued to some extent in a few fields in California, in the Oklahoma City field, and in a few other fields on a small scale. But, the practices in these few areas have not been susceptible of the careful study that would be devoted to this method if there were the urge for greater production, and if the various companies felt that they were justified financially in carrying on a serious study of this work. Now that the demand for greater productive methods is approaching rapidly, it seems likely that we are not as well prepared to carry through the lifting program as might be desired.

The handling of gas-lift methods, that is, the layouts and control of operations, is essentially an engineering matter, and must be handled as such if any satisfactory degree of success is to be attained. The training of engineers for this work cannot be a perfunctory matter if success is to be achieved in obtaining the best results. To acquire a broad understanding of the principles involved in order to perform under any set of conditions, requires a training of several years. An instance is known of an engineer being sent from a foreign country to the United States to acquire a practical and theoretical training, and was allotted a period of six months for this purpose while an intensive campaign was in progress in a large field in the Mid-Continent. At the end of this period the engineer felt that the time devoted to the study was inadequate and requested permission to remain a second term of six months, and up to the end of the year's study he had had an opportunity to study only methods applicable to one set of conditions, and then returned to a field where the conditions were entirely different from those with which he had become familiar.

Gas-lift methods cannot yet be taught in engineering schools except in a very superficial manner, owing to



**Westgate Oil Company's Cary 9, Oklahoma City, produced by continuous gas lift. Solvent treatment tank is set up close to the separator.**

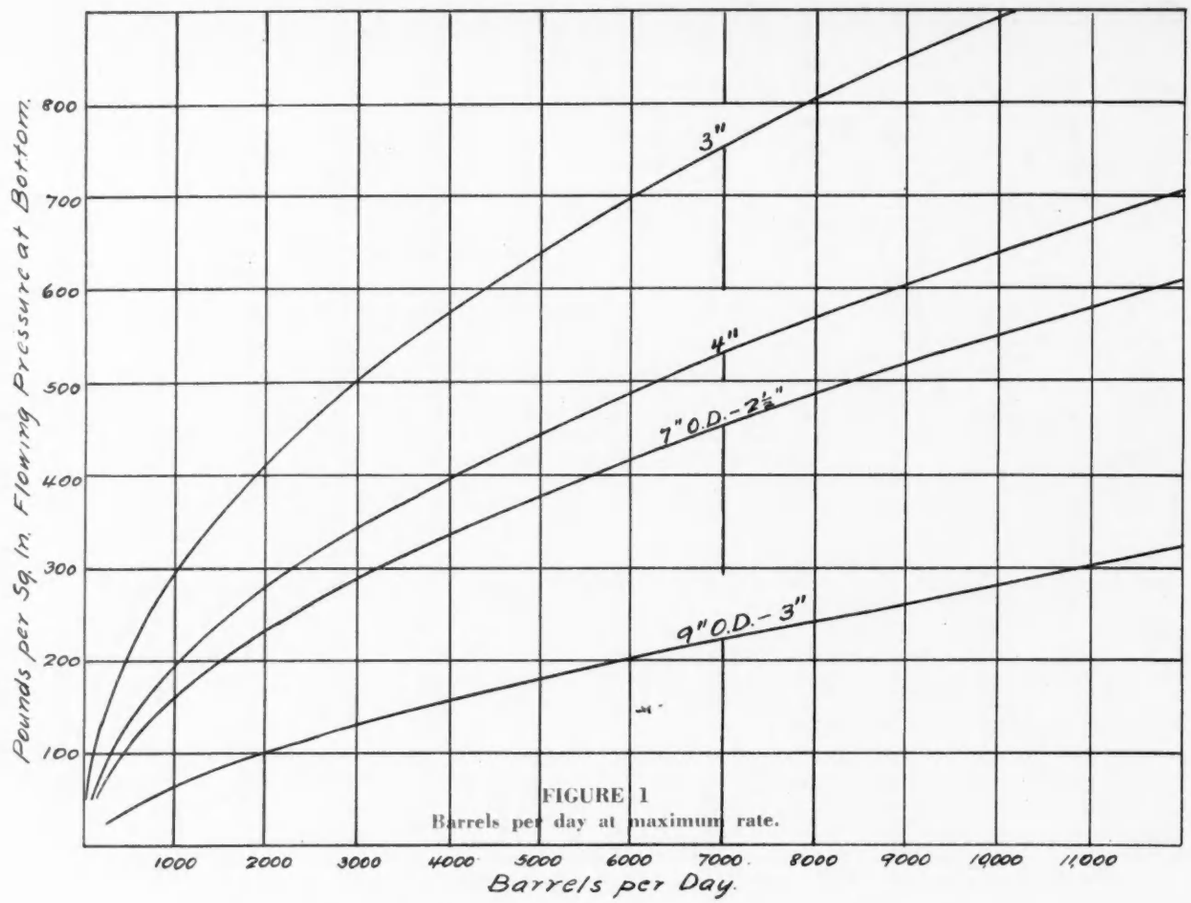



FIGURE 1
Barrels per day at maximum rate.

the absence of a general knowledge of the subject. Very little data of a definite correlated character are available on this subject such as would be of benefit to the engineer in making a study of the method.

Considerable publicity has been given in the technical press to layouts in gas-lift installations, but little has been published regarding "control" methods of handling the operations. These control methods, properly handled, are dependent as much on a scientific study of the problem as are the manufacture of steel and the production of automobiles.

### Production-Pressure Relations

Perhaps the first set of control data in connection with a producing well that should be determined is that of the maximum quantity of oil that can be lifted under the most favorable conditions either on natural flow or on gas-lift, through a pipe of given diameter, corresponding to a given pressure at the bottom of the well. It is not a simple matter to make curves of this relation even after a field has declined to a low production, usually because insufficient data are collected for the purpose, therefore, one can properly ask how such curves can be constructed when a field is newly opened. Such curves for a new field can be only approximate, and yet if the engineer has had experience in several fields in determining such relationships, he can make a reasonably accurate set of diagrams. This relation will be affected by several factors, the principal ones being the depth of the hole, diameter of the flow string, gravity of the oil, and temperature of the fluid in the flow string, and these factors can be determined early in the life of the field.

In Figure 1 there is shown a set of curves denoting the relation between bottom-hole flowing pressure and maximum production as a composite of several fields. In this composite field, for instance, the maximum production obtainable through a three-inch pipe with bottom-hole flowing pressure of 500 pounds per square inch is approximately 3000 barrels per day. The corresponding maximum production through a four-inch tubing with 500 pounds flowing pressure is 6300 barrels per day, while that through a seven-inch O.D. casing with 2½-inch tubing with the same flowing pressure is 8400 barrels per day. As the flowing pressure declines, the maximum production possible to obtain, declines as indicated in the curves, whether the oil be lifted by natural flow or by gas-lift.

It will be noted that the area of the flow string does not give the capacity relation between pipes of different diameters. For instance, the production obtainable through nine-inch O.D. casing with three-inch tubing at 300 pounds flowing pressure is 10,800 barrels, or nearly 11 times that obtainable through a three-inch tubing. This brings out the fact that in a field of great depth where there is a very prolific oil sand, that a large casing is more desirable than one of small diameter.

### Production-Energy Relation

After the production-pressure relationship has been established for various sizes of casing, it is desirable to determine the relation between production of oil and the quantity of gas required to lift the oil at maximum rate at a given bottom-hole flowing pressure. For the composite field under consideration, Figure 2 illustrates this relation by means of curves for the various sizes of pipes commonly employed.

For example, if the bottom-hole flowing pressure is

Antonius Stradivarius Cremonentis Faciebat Anno 1719

# STRADIVARIUS

Antonius Stradivarius, born at Cremona, Italy, in 1644, was apprenticed early in life to a violin maker. But his originality asserted itself, and by the time of his death in 1737 his violins were recognized as the world's finest.

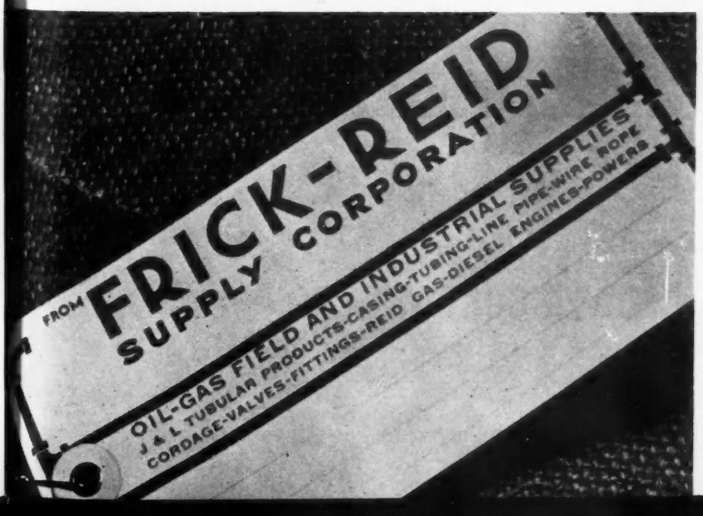
His instruments are still famous and now priceless because of their beauty of proportion, minuteness of detail and quality of materials and tone.

In his life time he made some two thousand violins, but comparatively few genuine specimens are in existence today. Careful imitations have been made in which the cracks and scratches of time have been meticulously incorporated and the Strad labels and marks copied. But persons with a knowledge of violins can readily tell the difference between the genuine and the imitation.

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936 9TH WORLDS FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 16 TO 23

One Stradivarius known as the "Swan" has sold for $55,000.00!

Today, in the oil industry, supplies and equipment bearing the Frick-Reid stencil or shipping tag are as carefully turned out as a Stradivarius from that old Cremonese shop. You can say of anything Frick-Reid sells, "Here is something fine—something genuine."




# FRICK-REID SUPPLY CORPORATION

PITTSBURGH, PA. TULSA, OKLA.

*Stores Everywhere*

# EASIER *to make up and far*

**High-Yield Casing makes up easier. Try it!**

***See for yourself how fast it can be set.***

**The threading of High-Yield Casing is one of the big reasons why the Wave of Acceptance rolls on. HIGH-YIELD Casing offers new and greater factors of safety in "running pipe."**

**The Wave of Acceptance Rolls On—**
**HIGH-YIELD Casing is now available, threaded and coupled, in 8⅝"—9⅝"—10¾"—11¾" and 13⅜"—Slip Joint, for running welded, in 11¾" to 22" incl.**

★A. O. SMITH CORPORATION★

*Milwaukee • Wisconsin*

BRANCH OFFICES: NEW YORK • TULSA • HOUSTON • LOS ANGELES

MORE FOR YOUR MONEY HIGH YIELD CASING LOWER-COST WELLS

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936 WORLD'S FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 9-16

# BETTER *joints when made!*

Manufactured under
U. S. Patent No. 1,993,842

# HIGH-YIELD CASING

***Making Steel work for you as it never did before***

© A. O. Smith Corp., 1

300 pounds, the maximum production that can be obtained through a nine-inch O.D. casing with three-inch tubing, is 10,800 barrels per day in this composite field. The total quantity of output gas required to lift 10,800 barrels per day through a nine-inch casing at flowing pressure of 300 pounds is approximately 14,000,000 cubic feet per day. If the oil is to be lifted through a three-inch tubing under flowing pressure of 300 pounds, the quantity that can be lifted is about 1000 barrels per day, and the quantity of output gas, as indicated in Figure 2, is approximately 1,300,000 cubic feet per day. *These figures are not to be regarded as applying to any particular field, but are illustrative of the manner in which the problem is approached.*

It will be noted in Figure 2 that as the quantity of oil declines that can be lifted at maximum capacity, the quantity of output gas required also declines, but the quantity of output gas per barrel increases, and it increases at a rapid rate as the flowing pressure declines.

The curve in Figure 2 indicates the relation between the total output gas and maximum production. This rate is not the most efficient rate; in other words, the oil can be lifted at a lower rate of production, and the quantity of gas per barrel lifted will be reduced. The rate at which the oil can be lifted at a given bottom-hole flowing pressure with minimum expenditure of gas per barrel is designated the "maximum efficiency rate." A curve can be constructed covering this maximum efficiency rate, similar to that for the "maximum capacity rate." Figure 3 indicates a comparison between these two rates of production, and illustrates the difference in gas consumption required when producing at these two rates.

Having determined the relations between flowing pressure and production, and between production and the quantity of output gas required to lift the oil, as indicated in Figures 1 and 2, the engineer is in a position at any time to ascertain whether the well is being produced in the proper manner; whether the casing is being maintained in proper condition; whether the proper size of flow string is employed; and whether the proper quantity of gas is being employed to accomplish the desired results.

For this purpose a curve of total quantity of output gas at maximum capacity is laid out for each well, as indicated by AB in Figure 3. In this case the well is assumed to have been completed with nine-inch O.D. casing. Curve CD in Figure 3 indicates the quantity of output gas required to lift the oil at maximum efficiency, this latter curve being worked up in the same manner as determined for the maximum capacity curves shown in Figure 2.

Tests are made from time to time of production of oil and of output gas actually employed, as shown in curves, EFG, HIJ, KLM, in Figure 3. The well will operate at maximum efficiency at point E, where the curve EFG crosses the line CD. That is, the lowest quantity of output gas per barrel of oil lifted is consumed at this point. The maximum quantity of oil that can be lifted with the flowing pressure that prevails at this particular time is indicated at the point F, where the curve EFG crosses the curve AB. If a greater quantity of gas be employed than that shown at F, the production of oil will be reduced, because the point is reached at which the increase in friction loss set up by the gas passing through the flow string builds up against the pressure at the bottom of the well, and reduces the quantity of oil that can enter the well.

### Progress Charts

With the curves established as indicated in Figures 1, 2 and 3, the engineer is prepared to maintain a progress chart on each well. Such a chart would be similar to that shown in Figure 4, on which would be noted from time to time, the reservoir pressure, AB, bottom-hole flowing pressure, CD, maximum production, EF, and the production actually being made by the well, GH.

The well for which the data are plotted in Figure 4 is one completed with seven-inch O.D. casing in which

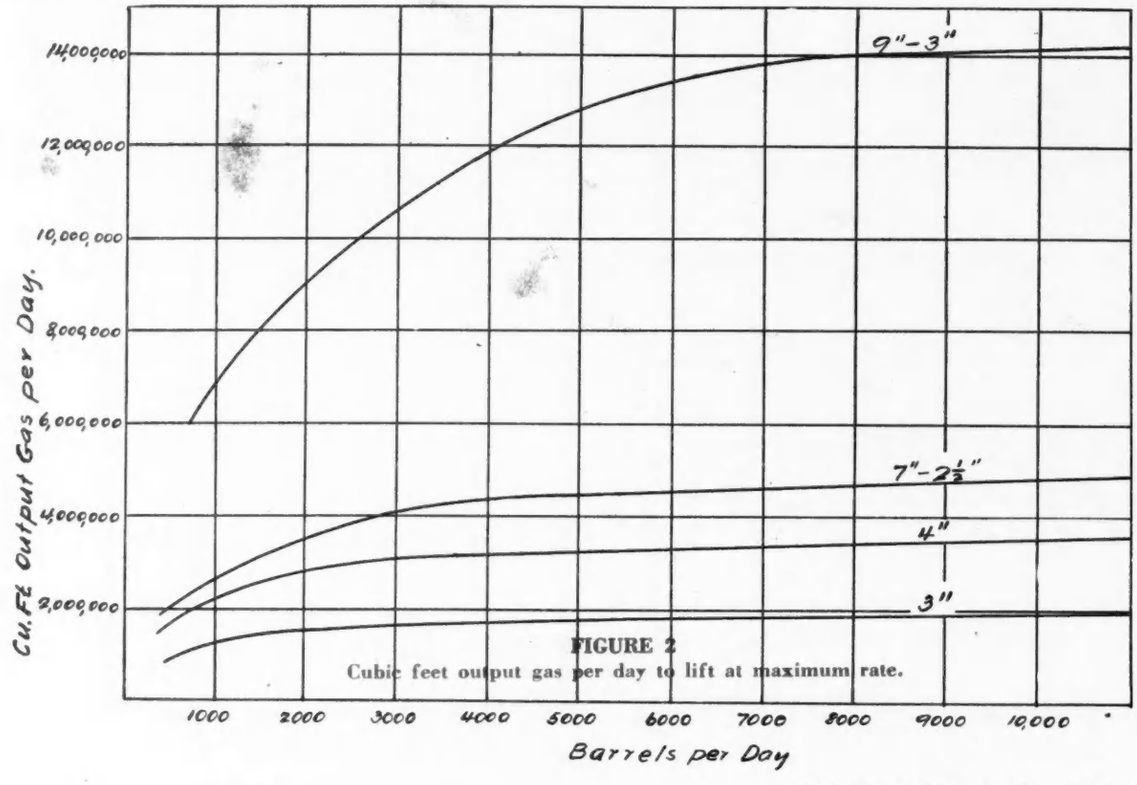



**FIGURE 2**
Cubic feet output gas per day to lift at maximum rate.

# To The Oil Fraternity

Kibele Tubing Catchers, Swabs and Pump Pistons are marketed exclusively through oil field supply companies.

•

They stock our products for your convenience. They cooperate in servicing your needs day or night.

•

We are proud to work with these friends who fill such an important place in today's oil industry.

# KIBELE

## MANUFACTURING COMPANY

SLUSH PUMP PISTONS, OIL FIELD SPECIALTIES, WELL SWABS

A KIBELE DOESN'T COST.... IT EARNS

5101 MAPLE AVE. DALLAS, TEXAS

Patented

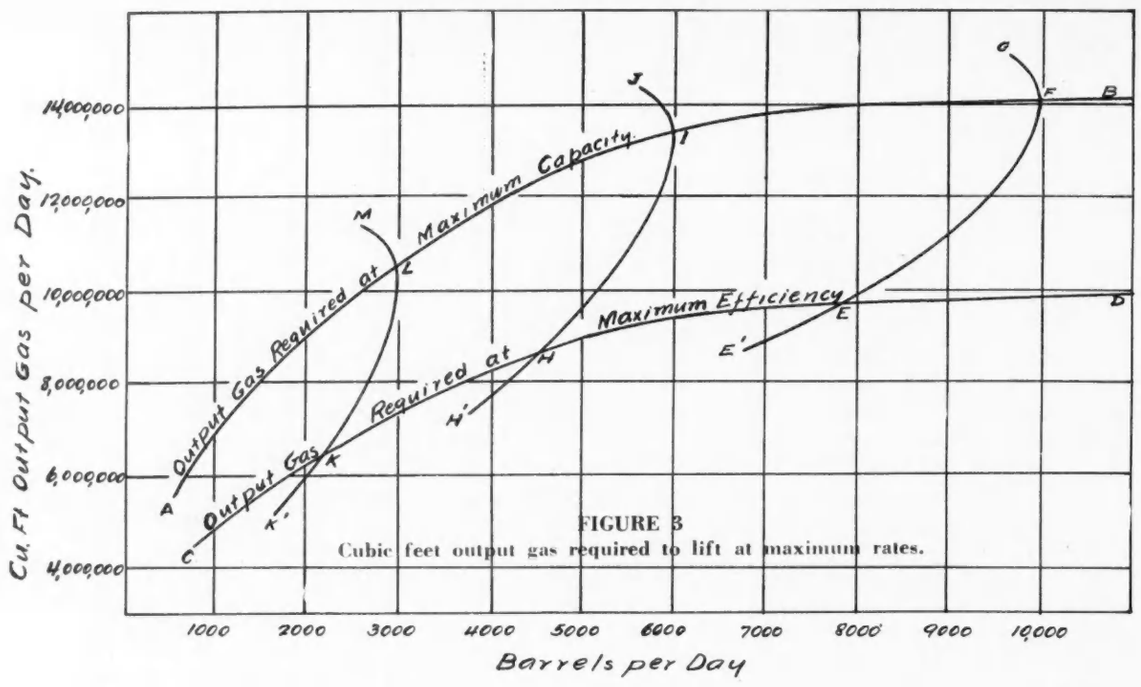



**FIGURE 3**
Cubic feet output gas required to lift at maximum rates.

is suspended a 2½-inch tubing. With the aid of the control curves on this well, the engineer can present a picture of the operation of the well to the executives that will illustrate clearly at any time the operating conditions of the well as compared with the potential condition.

Curve AB illustrates the different pressure conditions in the pool caused by variable rates of withdrawal, by water encroachment, and by repressuring, if such be employed.

Curve CD denotes the bottom-hole flowing pressure when producing at maximum capacity. This curve will depend largely on the pressure maintained in the reservoir, also on condition of the hole and permeability of the sand.

Curve EF illustrates the maximum capacity of the well and is dependent on the bottom-hole flowing pressure, the diameter of the casing, and on the condition of the casing.

Curve GH indicates the production actually made by the well. The points on this curve will be affected by proration allowables, conditions of the well and of the casing, and on the mechanical efficiency with which the operation is handled.

Tests should be made periodically in order that data can be obtained from which points can be plotted on the progress sheet from time to time. Frequently these progress charts, and the data obtained from making the periodical tests, will locate in the well troubles that can be remedied.

Such a case is presented in the Oklahoma City field, where paraffin accumulates on the casing to the extent of reducing the production to as low as 25 percent of the maximum capacity within 30 days time. The data obtained by the tests will immediately indicate whether the decline is due to actual decline in the capacity of the well, or whether it is due to accumulations on the casing, to leaky tubing or leaky casing, or to accumulations of sand at the bottom of the well.

### A Study of Paraffin Treatment

An illustration of the use of production curves to determine the efficacy of paraffin treatment is shown in Figure 5. From an actual pressure-production curve, similar to that shown in Figure 1, it became evident that a well had a potential of about 2300 barrels per day, but the maximum production possible to obtain on continuous gas-lift on a given date was about 1400 barrels per day. This indicated that there was a reduction in the size of the casing, and from experience in this field it was evident that the cause was a heavy deposit of paraffin on the walls of the casing.

In order to analyze the benefit of treating the paraffin with solvent, a curve was laid out on cross-section paper, as indicated in Figure 5, indicating the quantity of output gas required to lift the maximum quantity of oil, also a curve indicating the quantity of input gas required to lift the maximum quantity of oil. Owing to difficulty in obtaining close readings on the output meter in use, greater reliance was placed on the input meter.

A production test was made before the treatment was started and plotted as shown by curve EF. The treatment consisted in running a given quantity of solvent into the well on alternate days, the time for the treatment being about five hours each time. Each day following a treatment, a production test was made and plotted as indicated by curves GH, IJ, KL, MN, OP, and QR on the dates noted, 2/11, 2/13, 2/15, etc. The last test made on 2/21 indicated a production of nearly 2,300 barrels per day. At the end of this period, the pressure-production relation remained the same as at the beginning of the test, indicating that the benefit was derived solely from removing the deposit of paraffin from the casing Consumption of input gas per barrel of oil in the test made on 2/10 was 3,190 cubic feet per barrel, and at the end of the series of tests on 2/21, the input factor was 2,880 cubic feet per barrel, thus effecting a saving of about 300 cubic feet input gas per barrel lifted.

Similar production curves are being employed to control the production of wells on the Cary lease of Westgate Oil Company-Natural Gas Development Corp. in the Oklahoma City field, where paraffin is

SKF-EQUIPPED
BUILT BY
THE NATIONAL
SUPPLY CO.

# IF IT'S A PUMPER JOB

## *it's a job for* SKF *Roller Bearings*

National refuses to temporize with bearings. That's why they specified SKF for every roller bearing application on this Type THD 800 Unit Pumper.

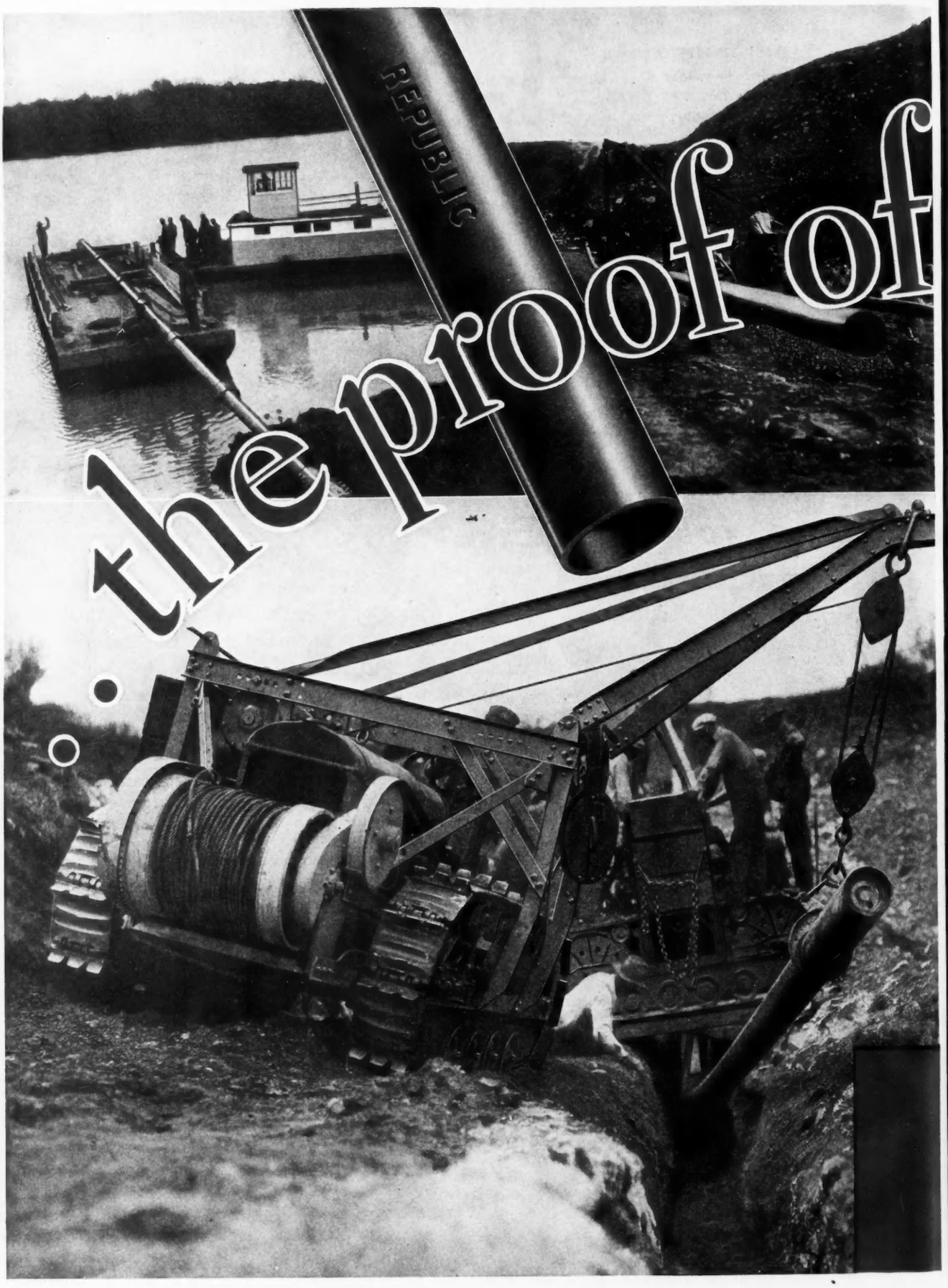
SKF Spherical Bearings carry heavy, alternating loads imposed upon the crank-pin from the walking beam. Also SKF Cylindrical Bearings on intermediate and high-speed shafts maintain reduction gears in proper mesh.

Whether your bearing problem requires a roller bearing, or a bearing of a different type, remember this: SKF can provide an anti-friction bearing for your every bearing need.

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.

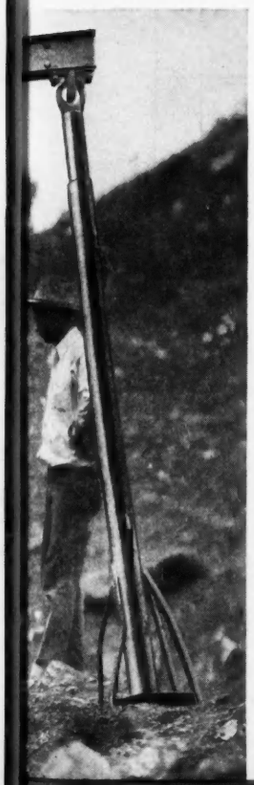
3590

SKF
BALL & ROLLER BEARINGS


REPUBLIC
the proof of

# the pudding

## FIVE YEARS' DEPENDABLE SERVICE IN PHILLIPS PETROLEUM COMPANY GASOLINE LINE



Engineers are finding from experience that it takes a better than ordinary pipe for lines that carry gasoline across the country—pipe that is free from inside scale—pipe that does not promote inside tubercular growths that inhibit flow—pipe that does not show corrosion after a short period of service.

The continued satisfactory operation of the Phillips Petroleum Company gasoline line from Borger, Texas to Kansas City and St. Louis, Missouri is proof that Republic Electric Weld Pipe is a better pipe—an ideal pipe for gasoline lines.

Features worth remembering—perfect roundness, uniform wall thickness and diameter, 100% weld, lengths up to 50 feet, freedom from scale, easy to weld, easy to bend, any desired yield point with high ductility.

Write for full information.

REPUBLIC STEEL

Republic Steel
CORPORATION
GENERAL OFFICES: CLEVELAND, OHIO

## REPUBLIC ELECTRIC WELD
HIGH YIELD POINT WITH HIGH DUCTILITY
## LINE PIPE

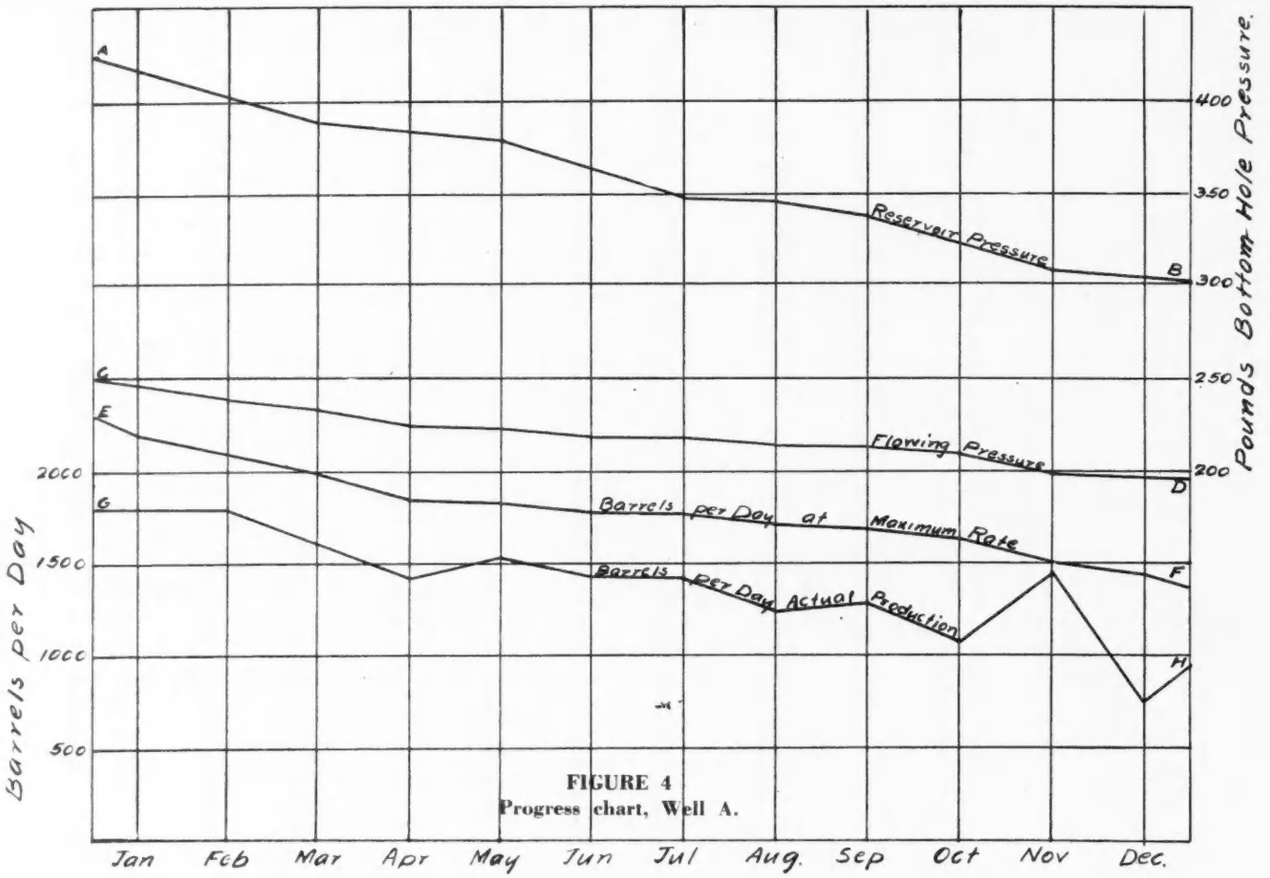



**FIGURE 4**
**Progress chart, Well A.**

accumulating in large quantity. The reservoir pressure on this lease is down to approximately 135 pounds and yet the production in 1935 was 2,600,000 barrels, or a greater quantity than the accumulated production during its previous four years of productive life. Frequent tests are made on the wells of this lease to determine the operating conditions of the wells, and the data so obtained are employed as a guide for remedying faulty conditions in the wells and for controlling the methods of operation.

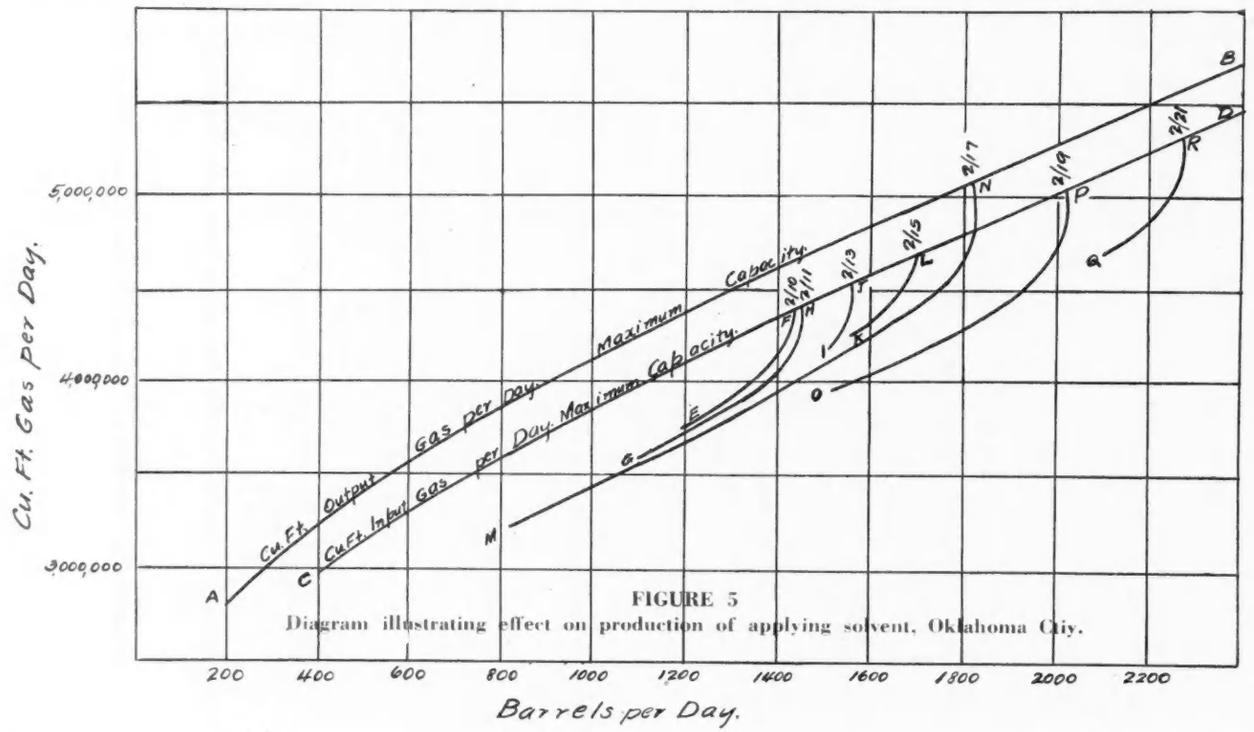
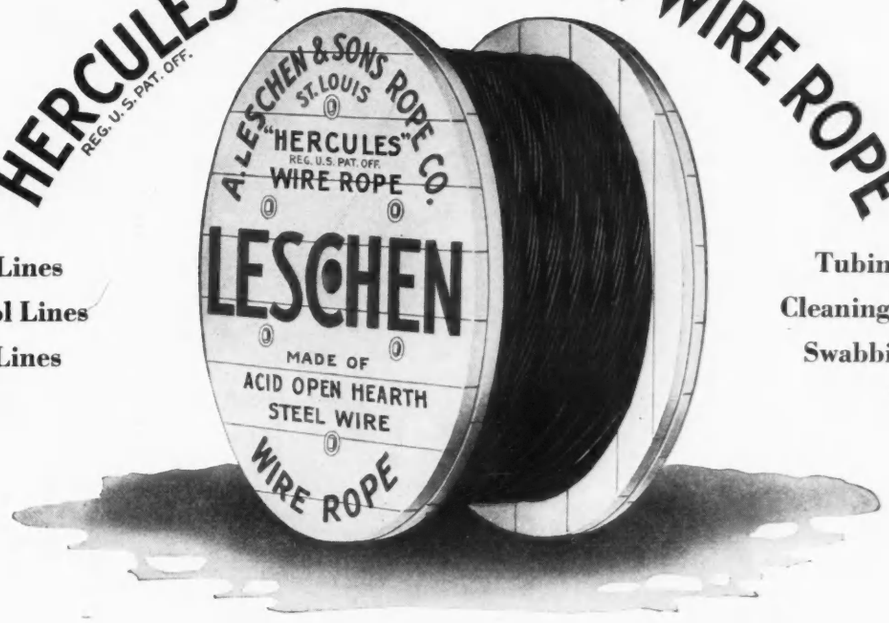



**FIGURE 5**
**Diagram illustrating effect on production of applying solvent, Oklahoma City.**

# "HERCULES" (RED-STRAND) WIRE ROPE

REG. U.S. PAT. OFF.

Rotary Lines
Cable-Tool Lines
Casing Lines




Tubing Lines
Cleaning-Out Lines
Swabbing Lines

## Repeat Orders Are Proof of Its Dependable Performance

### Quick Facts

*Acid Open-Hearth Steel* is used to make Leschen steel wire lines more uniformly dependable.

*Rigid Wire Tests* — Every wire is rigidly tested to meet our exacting requirements.

*Methods of Manufacturing* — Our 79 years rope making experience has taught us the most efficient methods of manufacturing.

*Construction* — Made in a wide range of constructions to meet specific conditions.

● After all is said and done, actual results on the job are what count, and we "point with pride" to the large number of producers and contractors who continue to send in their repeat orders for Leschen Wire Lines. There are reasons, of course, why Leschen Lines are so uniformly dependable and long-lasting, and we are always glad to give full particulars.

If you want more service for each wire rope dollar that you spend, why not give a Leschen Wire Line a chance to prove to you just what it can do? Measure its worth by its actual performance. We are confident that you, too, will find it uniformly dependable and economical.

## A. LESCHEN & SONS ROPE CO.

5909 KENNERLY AVE., ST. LOUIS, MO.
New York . . . Chicago . . . Denver . . . San Francisco

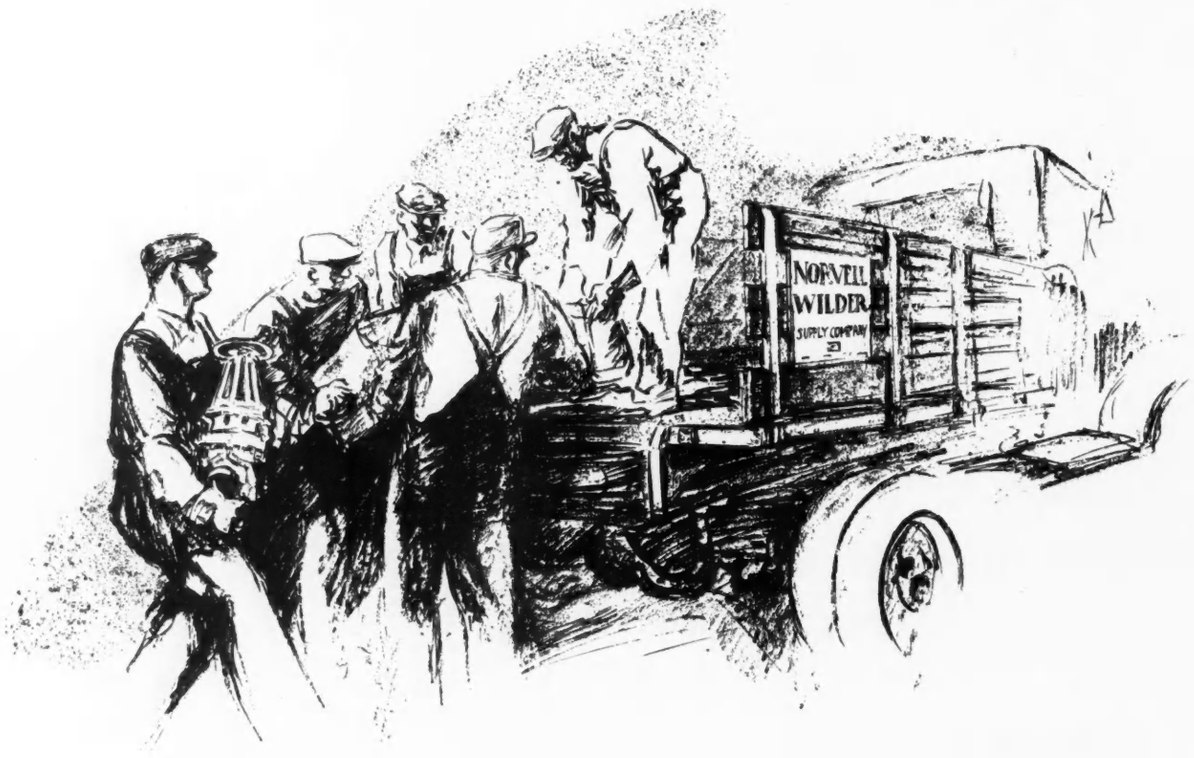
*Domestic Distributors*

CASEY & NEWTON
901 Century Bldg., Pittsburgh, Pa.
GULF HARDWARE & SUPPLY CO.
Corpus Christi, Texas
F. HAMILTON CO., INC.
Bradford, Pa.
HERCULES SUPPLY COMPANY
Ft. Worth, Texas
HILLMAN-KELLEY, INCORPORATED
2441 Hunter St., Los Angeles, Calif.
HINDERLITER TOOL COMPANY
Tulsa, Oklahoma
NORVELL-WILDER SUPPLY COMPANY
Beaumont, Texas
OSBORN MACHINERY COMPANY, INC.
Clarksburg, W. Va.
PARKERSBURG SUPPLY COMPANY
Parkersburg, W. Va.
STRAKER & TROUT
Mt. Pleasant, Mich.
UNION PIPE AND SUPPLY CO., INC.
Owensboro, Kentucky
UNION PIPE AND SUPPLY CORP.
Charleston, W. Va. and Paintsville, Ky.

*Export Distributor*

CONTINENTAL EMSCO COMPANY, INC., No. 30 Rockefeller Plaza, New York, N. Y.
*Branches:* Buenos Aires — London — Ploesti

# *A Supply House That*




**The right tool . . . at the right place . . . at the right time . . .** often means the saving of the entire investment in a well.

Realizing this, **NORVELL-WILDER** does everything in its power to cooperate with oil men in emergencies.

**HOW?** By maintaining large stocks at convenient warehouses so that there is no delay in getting tools or equipment to the lease **on time.**

# *Realizes the Importance of a RUSH ORDER*

★ YOU SAVE MONEY

★ YOU SAVE TIME

★ YOU OFTEN SAVE YOUR ENTIRE INVESTMENT IN YOUR WELL

By calling the NORVELL-WILDER MAN first

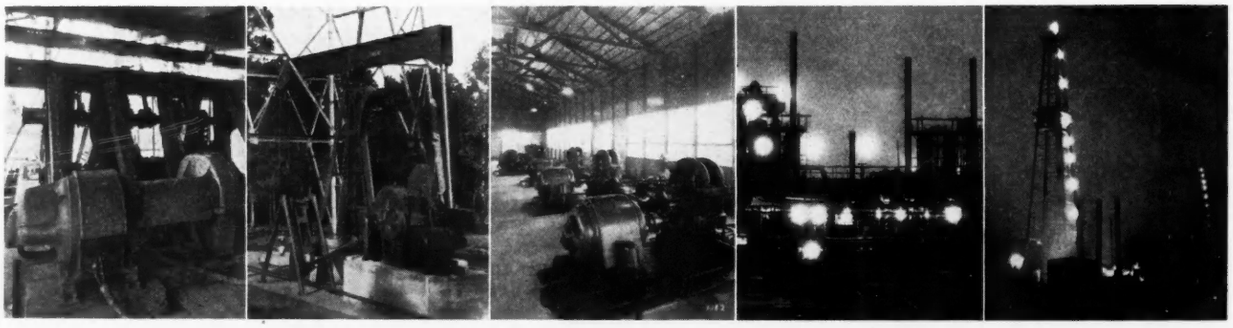
**Norvell-Wilder Supply Company**

- Drilling Rigs
- Pumping Wells
- Gathering Lines
- Pipe Lines
- Refineries
- Safe Illumination

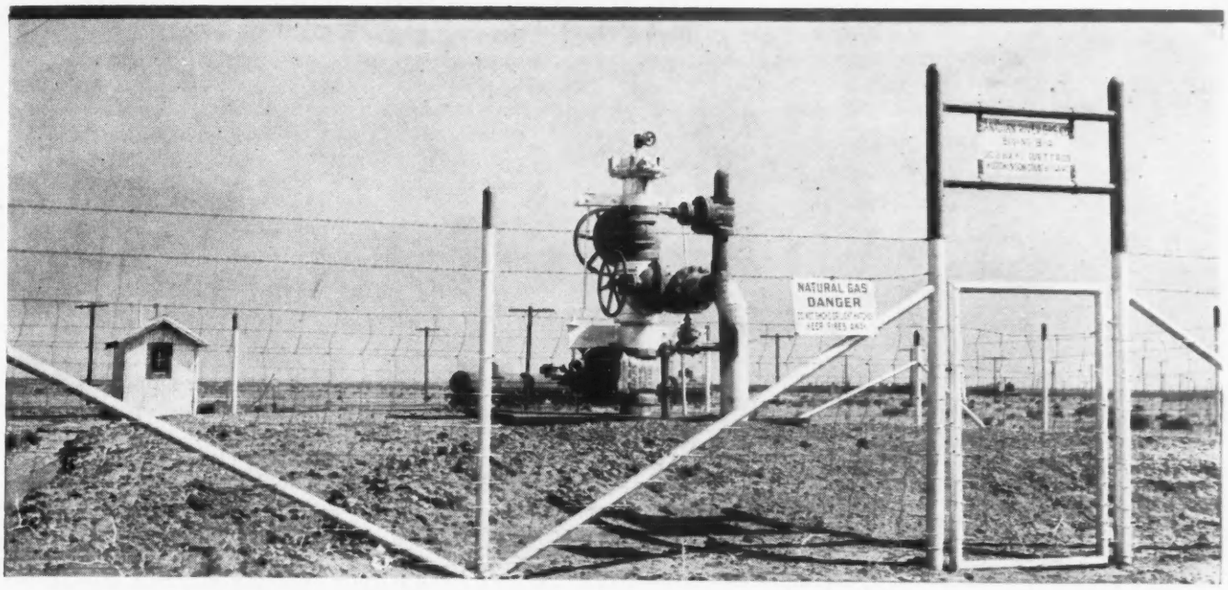
## Every branch of the Oil Industry can profit by the many advantages of . . . . . .

# PURCHASED ELECTRIC POWER

ASK YOUR LOCAL POWER COMPANY for pertinent facts and figures about your specific power job. Do it now! And don't take for granted that Purchased Electric Power is not available or wouldn't fit your picture until you find out . . . for sure!



# PETROLEUM ELECTRIC POWER CLUB




**Typical hook-up for a large gas well in the high-pressure area, Texas Panhandle.**

# *Gas Gathering Lines*

## EXTENSIVE AND EFFICIENT NETWORK IN PANHANDLE CARRIES HUGE DAILY VOLUME

By BRAD MILLS, Associate Editor

NATURAL gas from the Texas Panhandle affects the domestic or industrial life on one-eighth of the population of the United States, and through direct and loop connections it might be furnished to dozens of additional large cities normally obtaining their supply from other fields. The discovery of gas was made during the early search for oil, and the first gas wells were regarded as a liability. In a very short time, however, the area became the largest single producing gas field in the world, and during more recent years distribution through large trunk lines has reached a volume that can be supplied only by a field with a tremendous potential. The field is about 125 miles long and 25 miles wide, but all the area within this boundary does not produce gas. The connection between the various trends is such that for practical purposes the entire district may be called one series of fields.

The daily gas load gathered in the Texas Panhandle requires an elaborate network of gathering lines that touch all parts of an area as large as the state of Delaware. A wide range of well pressures, fluctuating market demands, trouble from condensates, sudden weather changes, sharp surface contrasts, and other unusual field conditions necessitated development of a gathering system that must function satisfactorily while supplying the required load for the greatest combination of compressors and trunk lines ever built for the transmission of natural gas.

### Six Major Lines

The six major trunk lines dependent upon gas from the area touch large cities 800 miles away, and extensions to more distant cities are under way. Even the extensive pipe line construction of the past five years has not brought daily requirements up to a volume that approaches the daily allowable of the field. Recent extensions to the producing area and additional gathering lines insure an adequate supply of gas for many years. The potential is so far below the allowable that the field is not heavily taxed when supplying the full winter load.

Although only sweet gas is used for supplying light and fuel requirements, the production of sour gas is an important part of the Panhandle gas program.

The sour or sulphur gas is chiefly utilized in the manufacture of carbon black and natural gasoline. Any gas showing more than 1½ grains of hydrogen sulphide per hundred cubic feet is classified as sour gas, and is handled by a separate gathering system.

### WEST FIELD SWEET GAS SCHEDULE
**March 1, 1936**
***(All figures expressed in daily M. C. F.)***

| | March Nominations | Connected Allowable |
|---|---|---|
| **Connected to Pipe Lines** | | |
| Continental Oil Company | ..... | 1,009 |
| Canadian River Gas Company | 137,931 | 143,325 |
| Central States Power and Light Company | 2,875 | 4,114 |
| Cities Service Gas Company | 122,052 | 99,554 |
| Dixon Creek Oil and Refining Company | 3,000 | 727 |
| Humble Oil and Refining Company | 936 | 2,770 |
| Gulf Production Company | 525 | 952 |
| Luther Pierson-Kingsmill | ..... | 112 |
| North American Oil and Gas Company | 29,000 | 15,303 |
| Panhandle Eastern Pipe Line Company | 55,000 | 56,854 |
| Panhandle Power and Light Company | 413 | 1,792 |
| Producers Utilities Corporation | 680 | 364 |
| S and W Oil Company | 1,900 | ..... |
| The Texas Company | ..... | 1,736 |
| Texoma Natural Gas Company | 150,000 | 146,694 |
| West Texas Gas Company | 16,250 | 25,659 |
| Not prepared, etc. | ..... | ..... |
| Miscellaneous Lines | ..... | ..... |
| Repressuring | ..... | 1,839 |
| **Connected to Gasoline Plants** | | |
| Cargray Corporation | 40,000 | 45,182 |
| Crawford Gasoline Corporation | ..... | ..... |
| Coltexo Corporation | ..... | 1,800 |
| Danciger Oil and Refineries, Inc. | 5,468 | 2,008 |
| Empire Gas and Fuel Company | 5,890 | 2,554 |
| F. C. Henderson Company | ..... | 8,948 |
| Independent Pipe Line Company (Phillips) | ..... | ..... |
| Magnolia Petroleum Company | 3,255 | 6,202 |
| J. M. Huber | 15,000 | 6,415 |
| Phillips Petroleum Company | 60,325 | 54,438 |
| Portland Gasoline Corporation | 6,000 | 11,870 |
| Shell Petroleum Company | ..... | 766 |
| Skelly Oil Company | 12,500 | 8,536 |
| Field-Fuel | ..... | 4,586 |
| Unconnected | ..... | 12,891 |
| Total | 669,000 | 669,000 |

### EAST FIELD SWEET GAS SCHEDULE
**March 1, 1936**
***(All figures expressed in daily M. C. F.)***

| | March Nominations | Connected Allowable |
|---|---|---|
| **Connected to Pipe Lines** | | |
| Brazos River Gas Company | 562 | 281 |
| Dozier Gas Company | ..... | 420 |
| Lone Star Gas Company | 35,000 | 75,635 |
| Mobeetie Gas Company | ..... | 295 |
| Northern Texas Utilities Company | 20,150 | 12,564 |
| Public Service Company | ..... | 517 |
| Shamrock Gas Company | 700 | 1,047 |
| Southern Oklahoma Utilities | ..... | 643 |
| Consolidated Gas Utilities Corporation | 22,581 | 7,123 |
| Wheeler Gas Company | ..... | 299 |
| Not prepared for test | ..... | ..... |
| **Connected to Gasoline Plants** | | |
| Airolene Gasoline Corporation | ..... | 1,877 |
| American Natural Gasoline Corporation | ..... | 13,877 |
| Buckeye Gasoline Company | ..... | 619 |
| Coltexco Corporation | ..... | 7,209 |
| Danciger Oil and Refineries, Inc. | ..... | 885 |
| Magnolia Petroleum Company | 2,882 | 1,159 |
| Midwest Refining Company | ..... | 395 |
| Phillips Petroleum Company | 90,311 | 22,635 |
| Shamrock Oil and Gas Company | ..... | 3,158 |
| Shell Petroleum Corporation | ..... | ..... |
| Skelly Oil Company | ..... | ..... |
| Smith Brothers Refining Company | 7,667 | 8,587 |
| The Texas Company | ..... | 1,860 |
| Not prepared for test | ..... | ..... |
| Field-Fuel | ..... | 5,298 |
| Unconnected | ..... | 13,470 |
| Totals | 179,853 | 179,853 |

The Panhandle district has a much smaller number of producing gas wells than might be suspected, due to the high acre-well ratio. The number of sweet gas wells does not exceed 925, while about 360 sour gas wells are rated as commercial producers. The daily potential of the sweet gas wells is around 16,500,000,000 cubic feet, and the daily potential of the sour gas wells stands at about 4,500,000,000 cubic feet. Less than 2½ percent of the sweet gas potential is required to supply the 650,000,000 to 850,000,000 cubic feet sent daily through the main transmission lines and to gasoline plants. About 17 percent of the sour gas potential, or 450,000,000 cubic feet, is being produced daily.

The sweet gas is scattered over an area of about 210,000 acres, which is about three and one-half times the sour gas acreage. The gas produced in various parts of the field usually is definitely sweet or sour, and little trouble from split-hair classification has developed. A well producing sweet gas remains a sweet gas producer, while the status of a sour gas well remains almost constant.

The entire producing area is divided into three divisions, the East field, West field and Sour Gas field. The maximum drainage area allowed each well in the West field is 640 acres, even if the location is in the center of a large producing section. Because of close drilling in the East field, the maximum drainage area allowed one well is 160 acres.

The well allowable is based on a combination acreage-potential basis, and the maximum allowable is 25 percent of the well potential. The monthly well allowables are based on factors derived from indicated demands, which in turn equal the field allowable. Each company makes daily nominations for the following month on the fifteenth of each month. The total connected allowable always equals the total nominations, but each company's nominations do not necessarily equal its connected allowable. The method of determiing the well allowables in the West field for the month of March, 1936, follows:

$$\text{Allowed Gas for March} = 669{,}000 \text{ M. C. F.}$$

$$\frac{\text{50 Percent Allowed Gas}}{\text{Sum Well Potentials}} = .03859 \text{ Potential Factor}$$

$$\frac{\text{50 Percent Allowed Gas}}{\text{Sum Well Acres}} = 1.9342 \text{ Acreage Factor}$$

Well Acres × Acreage Factor = Acreage Allowable
Well Potential × Potential Factor = Potential Allowable
Sum of Potential and Acreage Allowable = Individual Daily Well Allowable

172,937 Acres 542 Wells 8,666,543 M. C. F. Potential

Where several leases touch in any way and belong to one company, that company can drill one well and

### PANHANDLE SOUR GAS SCHEDULE
**March 1, 1936**

| | M.C.F. Nom. | M.C.F. Allow. |
|---|---|---|
| Canadian River Gas Company | 2,000 | 3,028 |
| Crawford Gasoline Company | 6,000 | 188 |
| Gulf Production Company | 232 | ..... |
| F. C. Henderson Company | 40,000 | 9,508 |
| Magnolia Petroleum Company | 6,686 | 3,061 |
| Huber Corporation | 97,143 | 30,199 |
| Phillips Petroleum Company | 330,335 | 233,835 |
| Portland Gasoline Corporation | 30,000 | 1,722 |
| Shamrock Oil and Gas Company | ..... | 93,021 |
| Shell Petroleum Company | 2,620 | 3,094 |
| Skelly Oil Company | 38,000 | 34,902 |
| Sunray Oil and Gas Corporation | ..... | 3,097 |
| Field Fuel | ..... | 575 |
| Unconnected Wells | ..... | 25,443 |
| Miscellaneous Companies | ..... | 1,378 |
| Totals | 513,016 | 443,051 |

# TRUCKS! TRUCKS! TRUCKS!
# SERVICE SERVICE SERVICE

**THE BIG PARADE IS ON! . . . Already, The Lane-Wells Co. has a fleet of nine Gun Perforator Service Trucks serving the Oil Industry in the Gulf Coast, Mid-Continent and California Fields. . . The growing demand for Gun Perforating has kept these trucks going night and day, and we apologize to those customers who have been kept waiting at times. . . We are building more trucks and equipment as fast as possible—three more of these "Oil-Getters" will be sent to Texas within two months, and three others are under construction, to be sent where needed. . . . THE REASON for all this is spelled in one word: "R-E-S-U-L-T-S". . . . Call the Lane-Wells office nearest you for more information.**

Devices and method of operation licensed by Technicraft Engineering Corporation under Patents No. 1,582,184; 2,029,454; 2,033,562; 2,029,478; 2,029,491 and 2,029,490.

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936
9TH WORLDS FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 16 23

Tomorrow's Tools - Today!

## THE LANE-WELLS CO.
## Gun Perforator Service

LOS ANGELES, CALIFORNIA . . . . NEW YORK CITY, NEW YORK

THE LANE-WELLS COMPANY OF TEXAS • HOUSTON AND CORPUS CHRISTI ○ THE LANE-WELLS COMPANY OF OKLAHOMA • OKLAHOMA CITY AND TULSA

*Nearly a*
**QUARTER**
*of a*
**CENTURY**
*of*
**Experience**

***back of T-I-W . . . the most complete line of oil field products manufactured by one organization.***

**T-I-W BITS**
- Fish Tail Bits, Regular
- Fish Tail Bits, Detachable Blade
- Blades for Removable Blade Bits

**T-I-W PACKERS AND SETTING TOOLS**
- Bottom Hole Packers
- Hook Wall Packers
- Packer Anchors
- Liner Packers
- Setting Tools
- Set Shoe Assemblies
- Full String Packers
- Pin Packers

**T-I-W HEAVING SHALE DRILLING ASSEMBLIES**

**T-I-W SAFETY JOINTS**

**T-I-W SLIPS**
- Rotary Slips
- Casing Slips
- Tubing Slips
- Adapters

**T-I-W VALVES**
- Compound Valves
- Back Pressure Valves
- Kelly Joint Safety Valves

**T-I-W CASING AND TUBING HEADS**
- Casing Head Stuffing Boxes

**T-I-W TOOL JOINT BREAKERS**

**T-I-W TUBING ANCHORS**

**T-I-W ROD LINE WEIGHTS**

**T-I-W WRIST PINS**

**T-I-W CEMENTING HEADS**

**T-I-W LINER PULLERS**

**T-I-W FISHING TOOLS**

**T-I-W PACKERS**

**T-I-W LINER SETTING TOOLS**

**T-I-W CASING ACCESSORIES**

**T-I-W MILLING TOOLS OF ALL KINDS**

**T-I-W NIPPLES**

**T-I-W PULLERS**

**T-I-W WHIPSTOCKS AND WHIPSTOCK SETTING TOOLS**

**T-I-W DRILL COLLARS**

**T-I-W CEMENT HEADS**

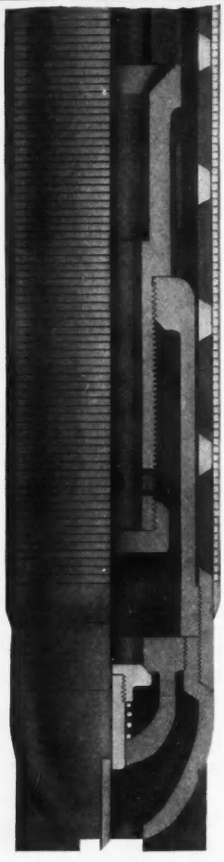
**T-I-W ROTARY REAMERS**

**NUMEROUS MISCELLANEOUS ITEMS**

★

***Complete Machine and Forge Shops for Quick, Thorough, and Practical Service.***

# You Benefit



## FROM THE SPECIALIZED OIL FIELD EXPERIENCE BACK OF T-I-W PRODUCTS

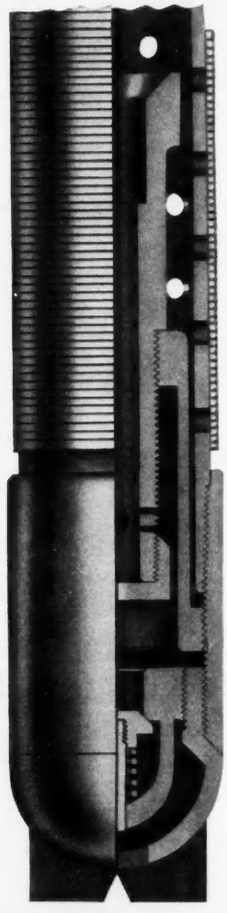
## T-I-W INSERTED TYPE BACK PRESSURE VALVES

« Left «

FOR USE IN AREAS WHERE SANDS ARE VERY THIN OR WHERE A VERY SMALL AMOUNT OF SAND IS TO BE TAKEN IN.

★ Back pressure valve is inserted in the end of the screen, thus making practically entire length of joint a screen.

★ Made in both regular and triple seal and available in all sizes.



## T-I-W SHORT TYPE TRIPLE SEAL BACK PRESSURE VALVES

» Right »

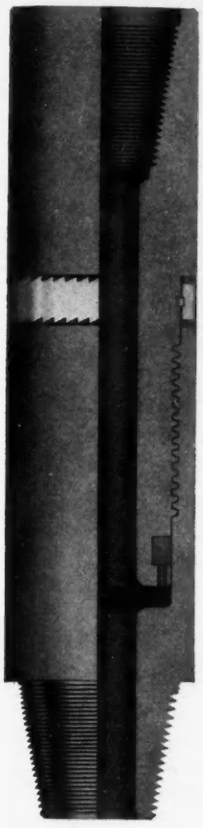
IDEAL FOR SHALLOW SANDS AS THIS DESIGN ENABLES SCREEN TO BE SET VERY CLOSE TO THE BOTTOM OF THE WELL. ELIMINATES UNNECESSARY BLANKING OFF OF PAY SAND.

★ Valve housing is only nine inches in length. The mechanism of the valve extends up inside the screen allowing area for a flow around the mechanism.

**T-I-W Tools are always TOPS with major operators**

# TEXAS IRON WORKS

1401-1423 MAURY ST. HOUSTON, TEXAS

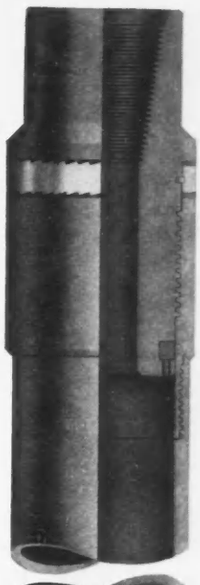


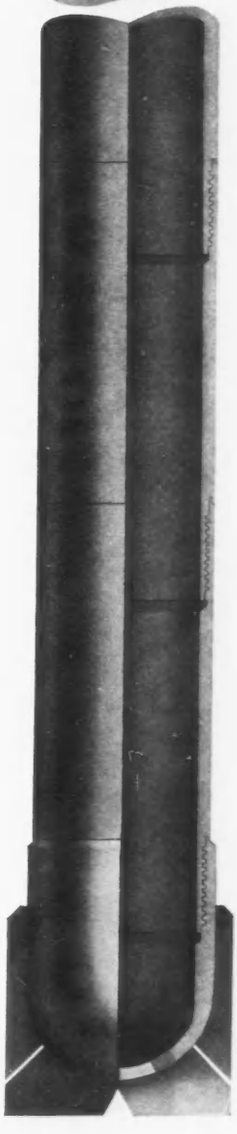
MAJOR OPERATORS DEPEND UPON

# T·I·W· Experience

···FOR DEPENDABILITY···

★ ★ ★





## T·I·W· HEAVING SHALE DRILLING ASSEMBLY

**WHEN THE SHALE FORMATION IS ENCOUNTERED,** the shale bit illustrated herewith is run in the hole on a combination string of regular drill pipe and flush joint casing, the latter on bottom.

## T·I·W· SAFETY JOINT BREAKS LOOSE SAFELY

★ As strong as any joint in the string.

★ Will not back off going into the hole, yet it will break out on left rotation, at about one-fifth the pressure required to break out a tool joint.

## IDEAL TO RUN

★ Above shale drilling assemblies . . . all fishing tools . . . cutting tools . . . lace joints . . . reamers . . . and roller bits.

The two types of pipe are connected by a T-I-W Safety Joint. Shale is drilled in the regular manner.

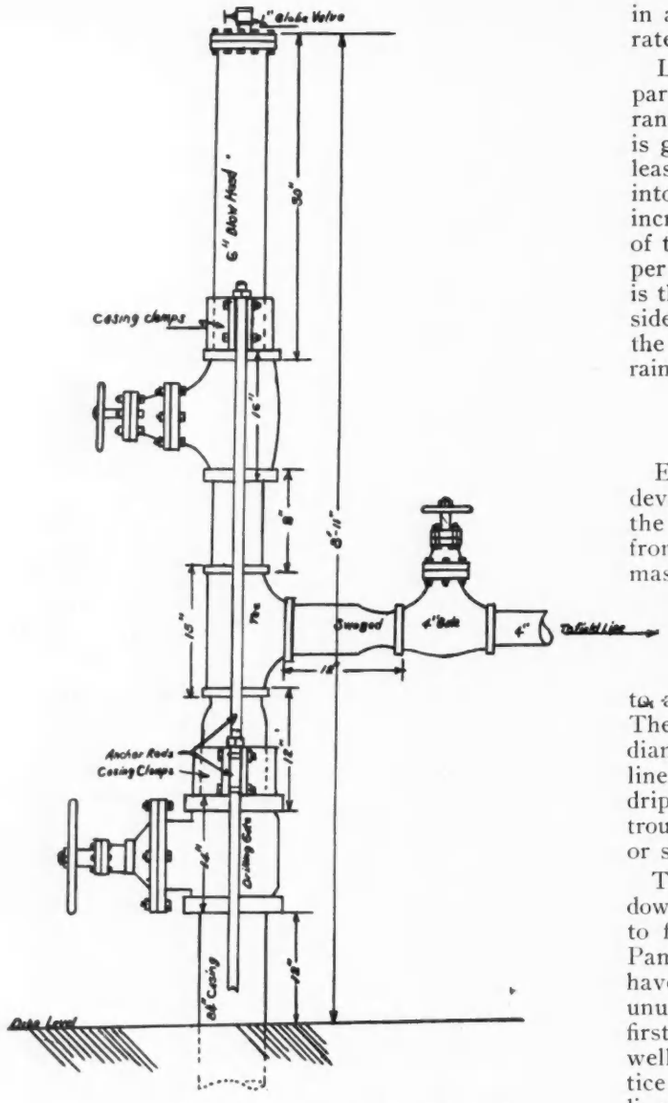
In case pipe becomes stuck, and cannot be rotated or pulled, drill stem is rotated to the left, breaking out the T-I-W Safety Joint, and leaving flush joint casing in the hole.

**T-I-W Shale Bit** may now be very easily milled through and the procedure repeated with smaller diameter flush joint casing.

**Be Safe · · Be Sure · · ALWAYS SPECIFY T·I·W·**

# TEXAS IRON WORKS

1401-1423 MAURY ST. HOUSTON, TEXAS




**Canadian River Gas Company Meter Setting**

get either a 160-acre or 640-acre allowable, provided the sum acreage equals the required drainage area for one well. Where leases do not touch, it is necessary to treat each lease as a unit or part of a unit. Large leases predominate in the West field, but smaller tracts are common in the East field.

The gas production comes from lime and granite wash. The wells are from 1800 to 3000 feet deep, and may be drilled at small expense. The original bottom hole pressure was about 430 pounds, but due to heavy withdrawals in a number of sectors the average bottom-hole pressure has dropped far below the original average. In a few areas, pressures of 420 pounds are not uncommon, but some of the very weak wells show a bottom-hole pressure below 200 pounds. Pressures are highest in parts of the West field that have not been completely developed. A satisfactory well pressure is one considerably higher than the pressure usually carried on field gathering lines. In sections of the field showing very low pressures, the cost of gathering the daily gas load is higher per thousand cubic feet than in the higher pressure areas. The lowest well pressures are found in areas that have been produced at unusually high rates.

Large leases are common in the west and central parts of the field. The largest block, the Burnett ranch, contains 107,000 acres, of which a large part is gas land. Many of the largest ranches have been leased to one company, but others have been divided into smaller blocks. The proved acreage has been increased yearly. Most of the leases in the east part of the field are small, but the 160-acre drainage area per well holds. An interesting phase of development is that the field extends from the well-populated east side of the Panhandle to the bad-land area toward the west. This great expanse and difference in terrain have added to the cost of development.

### Gathering Systems

Empire Gas & Fuel Company (Cities Service) has developed its own type of gathering system to handle the daily gas load in the Pampa area. Gas is taken from each well through the side gate on the Christmas tree, this opening acting as a regulator. The gas is measured from each well with an orifice meter, and immediately ahead of the meter is a "Class C" drip that handles the water and condensation. After leaving the meter, the gas goes to a lateral line, which may handle several wells. The laterals range in size from 4 to 12 inches, the diameter depending on the number of wells on each line. The laterals are also liberally supplied with drips, since solids in the line cause considerable trouble. All laterals lead to the main field gathering or suction line, which is a 20-inch carrier.

The pressure on the main gathering line is held down to a point that permits the low-pressure wells to flow into it. The lowest well pressure in the Pampa area is 200 pounds, but a number of wells have a bottom-hole pressure of 400 pounds. It is not unusual to produce the low-pressure wells during the first 15 days of each month, and the high-pressure wells during the latter part of the month. This practice permits maintaining a high gathering or suction line pressure during at least half of the month, which in turn results in a much lower compressor expense. By producing most of the weak wells together, trouble from the strong wells is reduced to a minimum. It is obvious that a combination of 200-pound and 400-pound wells flowing into one field gathering system would necessitate careful regulation to obtain the daily allowable from each well. The field meters are checked by a master meter located on the main suction line about four miles from the compressor station. It is necessary to drive more than 300 miles in checking all of the company's 68 gas wells and returning to headquarters.

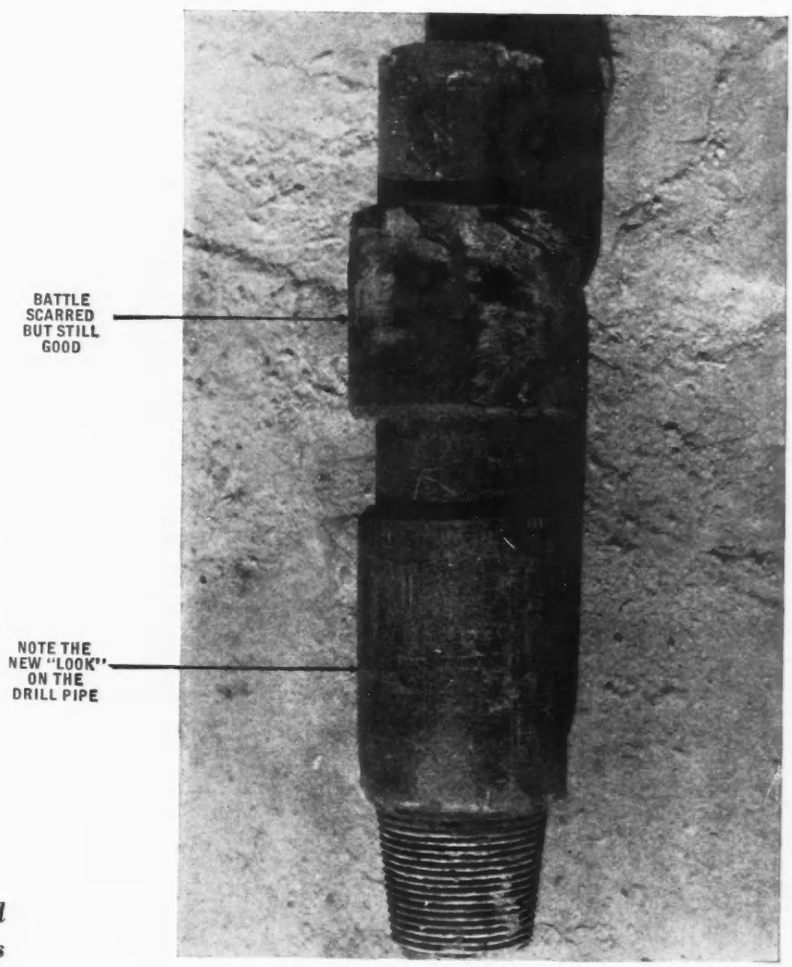
This company's wells and field gathering system furnish gas for a 20-inch transmission line that supplies Wichita, Kansas, Kansas City and other cities in the territory. Six, 1000-horsepower, twin compressors are used for sending the daily load on its way. The intake pressure at the plant ranges from 160 to 200 pounds, and the average discharge pressure is 430 pounds. The compressors are 13½ x 36 on the compressor end. Temperature of the incoming gas is about 50°F and the discharge temperature is 150°F. Booster stations have been placed along the line at intervals of 80 or 90 miles, and engines similar to those in service at Pampa are used. The

# "after 4 years of very tough drilling service the tool marks still show"

IN a pipe yard at Kettleman Hills this photograph was taken. It shows a 6″ extra long Patterson-Ballagh Protector which was in constant drilling service for four long years, operating under the severest drilling conditions. Note the original factory tool marks on the drill collar. It proves minimum of abrasion. It proves the extra life given to drill pipe when equipped with Patterson-Ballagh Protectors.

If you want to lower your drilling costs the surest way is to install Patterson-Ballagh Protectors.

*Fresh stocks warehoused in principal drilling fields*




# PATTERSON-BALLAGH PROTECTORS

## ALL-RUBBER PROTECTORS-THE ORIGINAL

PATTERSON-BALLAGH CORPORATION

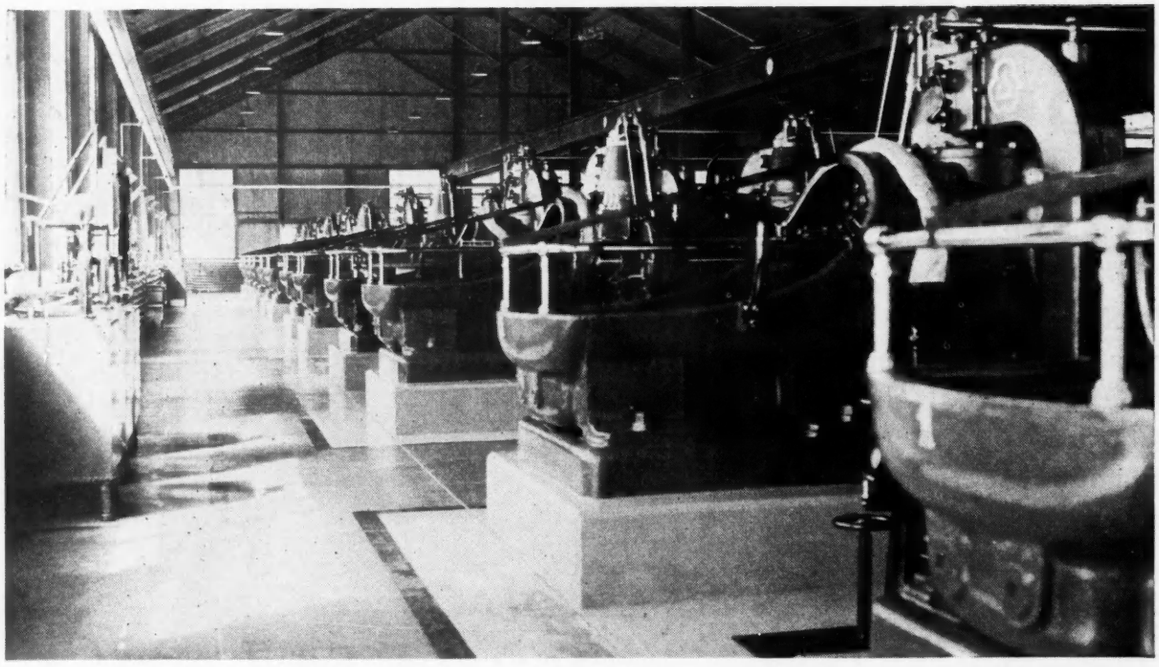
PLANT AND GENERAL OFFICES: 1900 EAST SIXTY-FIFTH STREET, LOS ANGELES, CALIFORNIA, U. S. A.

Texas and Gulf Coast Distributors:

BETTIS SALES COMPANY, 515 Merchants & Manufacturers Bldg., Houston, Texas
New York Office: 39 Cortlandt Street

Oklahoma Office:
438 Northwest Twenty-Sixth Street, Oklahoma City, Oklahoma

Fresh Stocks Carried at: Casper, Wyoming; Oklahoma City, Ada, Oklahoma; Lake Charles, Houma, Louisiana; Hobbs, New Mexico; Houston, Odessa, Texas; Kettleman Hills, Bakersfield, Ventura, Los Angeles, California. Sold by all Supply Houses.



**Interior of a large compressor plant in the Texas Panhandle.**

20-inch line has a capacity of 120,000,000 cubic feet daily, and the winter load ranges from 85,000,000 to 100,000,000 cubic feet daily.

Texhoma Natural Gas Company's field gathering system is one of the most extensive in the field, and a number of original practices have been developed. The distance from one end of the company's holdings to the other is more than 90 miles, although the number of gas wells on the line is only 96. The three chart men drive from 400 to 500 miles daily in visiting all of the wells and returning to camp.

This company's well and lateral lines vary from four to 10 inches in diameter. Where a short line serves only one small well, a four-inch line is used. Larger well lines are used for producers having high potentials. As wells are added to the laterals, the lines are enlarged as they approach the main gathering line. The suction or main gathering line is a 24-inch carrier.

The usual well hookup includes the side valve in the Christmas tree, a drop to ground level, a horizontal run that takes care of the drip, a riser and a valve, another short horizontal run to provide for the orifice meter, and a short drop in which a plug valve is located. The wells are ordinarily regulated by this plug valve, although the same effect might be obtained by using the side Christmas tree valve. A master meter is used in the main suction line as a check against well meters.

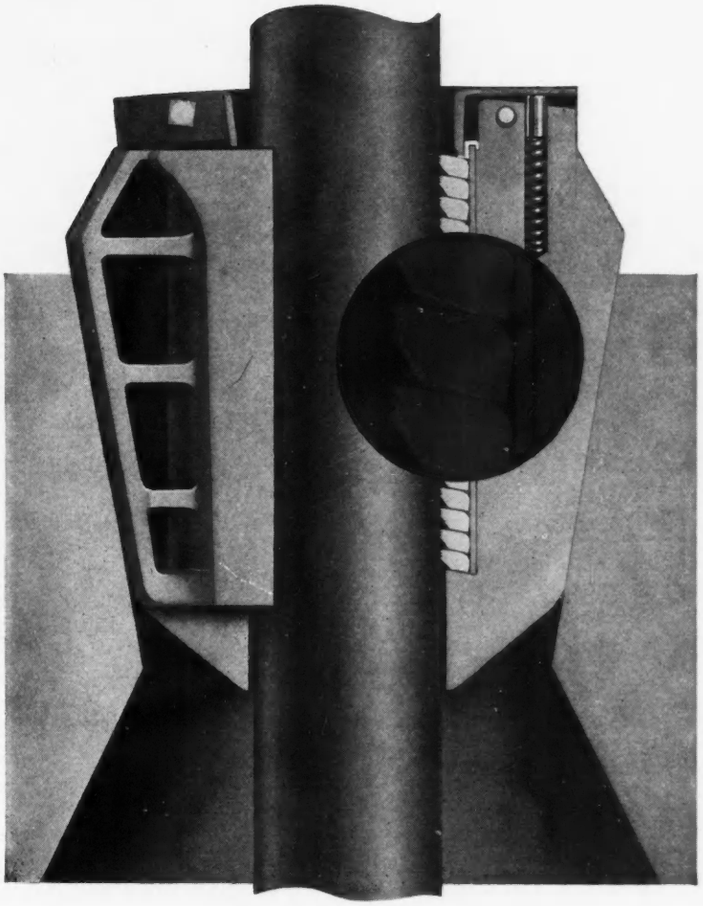
### Large Booster Plant

Texhoma Natural Gas Company operates the largest single installation of gas-engine driven compressors ever assembled under one roof. They include fifteen 1250-horsepower twin tandem, gas-engine driven compressors that are capable of developing and operating against unusually high line pressures. The power end in each compressor is 24 x 36, while the compressor end is 12⅝ x 36. The compressors pick up the gas at a pressure of about 210 pounds and discharge it at an average pressure of 710 pounds.

Although Panhandle gas is considered a dry product, it yields above three-tenths of a gallon of natural gasoline when compressed and passed through absorbers. Texhoma Natural Gas Company has placed the absorbers beyond its large compressors and in the main transmission system. This simply means that the gas as it comes from the field is compressed to 710 pounds and sent to the main transmission line through the high pressure absorbers. These absorbers, which are a combination bubble plate and tile packed type, do not reduce the pressure of the gas to any extent and they are very effective. Use of high pressure absorbers in the main transmission line makes the extraction of natural gasoline incidental to compressor operation.

With a discharge pressure of 710 pounds to the 24-inch transmission line, it is possible to deliver more than 200,000,000 cubic feet of gas daily through the 800-mile carrier that terminates near Chicago. Compressor stations are located along the line at intervals of 75 miles, the pressure drop in such a large line being rapid. Five, 1250-horsepower compressors exactly like those in the main field station are used at each booster station. The booster stations pick up the gas at a pressure of about 450 pounds and discharge it at the original pressure of 700 pounds, or more.

Canadian River Gas Company has developed a number of original practices that have increased the efficiency of its gathering system. This company's holdings extend over an area 50 miles long and 20 miles wide and some of the country is very rough.



# SLIPS sticking in BOWL MAKE FOR COSTLY PULLING DELAYS

WITH MISSION SLIPS
THE ROLLING MOVEMENT
OF THE DOGS FROM THE
PIPE BRINGS ABOUT

● IMMEDIATE RELEASE ●

***Result***

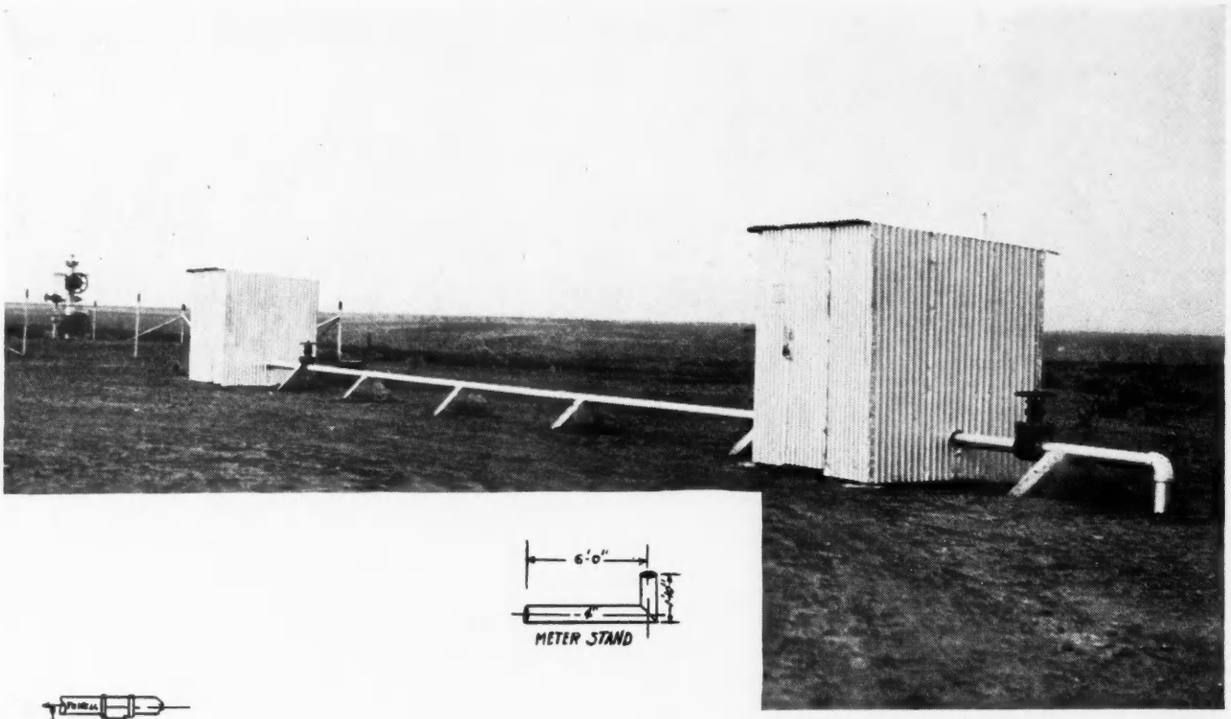
NO COSTLY DELAYS

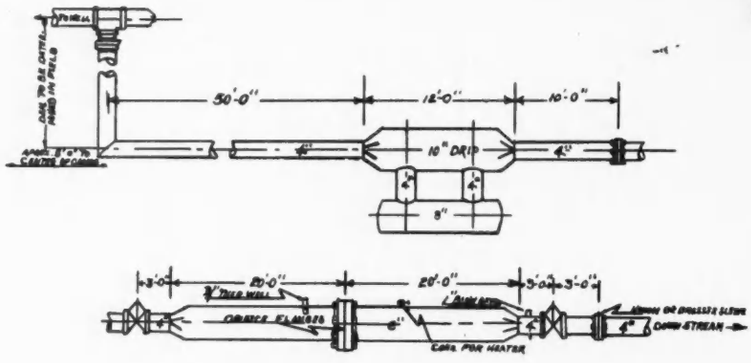
# MISSION MANUFACTURING CO.

**HUMBLE ROAD - - - - - - - - - - HOUSTON, TEXAS**

MISSION VALVES . . . MISSION SLIPS . . . MISSION PISTONS . . . MISSION SWABS

*Sold Through Supply Stores Everywhere*







**Canadian River Gas Company Meter Setting**

Underground runs are used between the wells and the tieing-in point along the field gathering lines. This practice helps to prevent a sudden change in the temperature of the gas and increases meter efficiency.

This company's field gathering system includes 45 miles of four-inch, nine miles of six-inch, eight miles of eight-inch, 13 miles of 10-inch, seven miles of 12-inch, five miles of 14-inch, and two miles of 16-inch. The main suction or field gathering line is a 20-mile, 22-inch carrier.

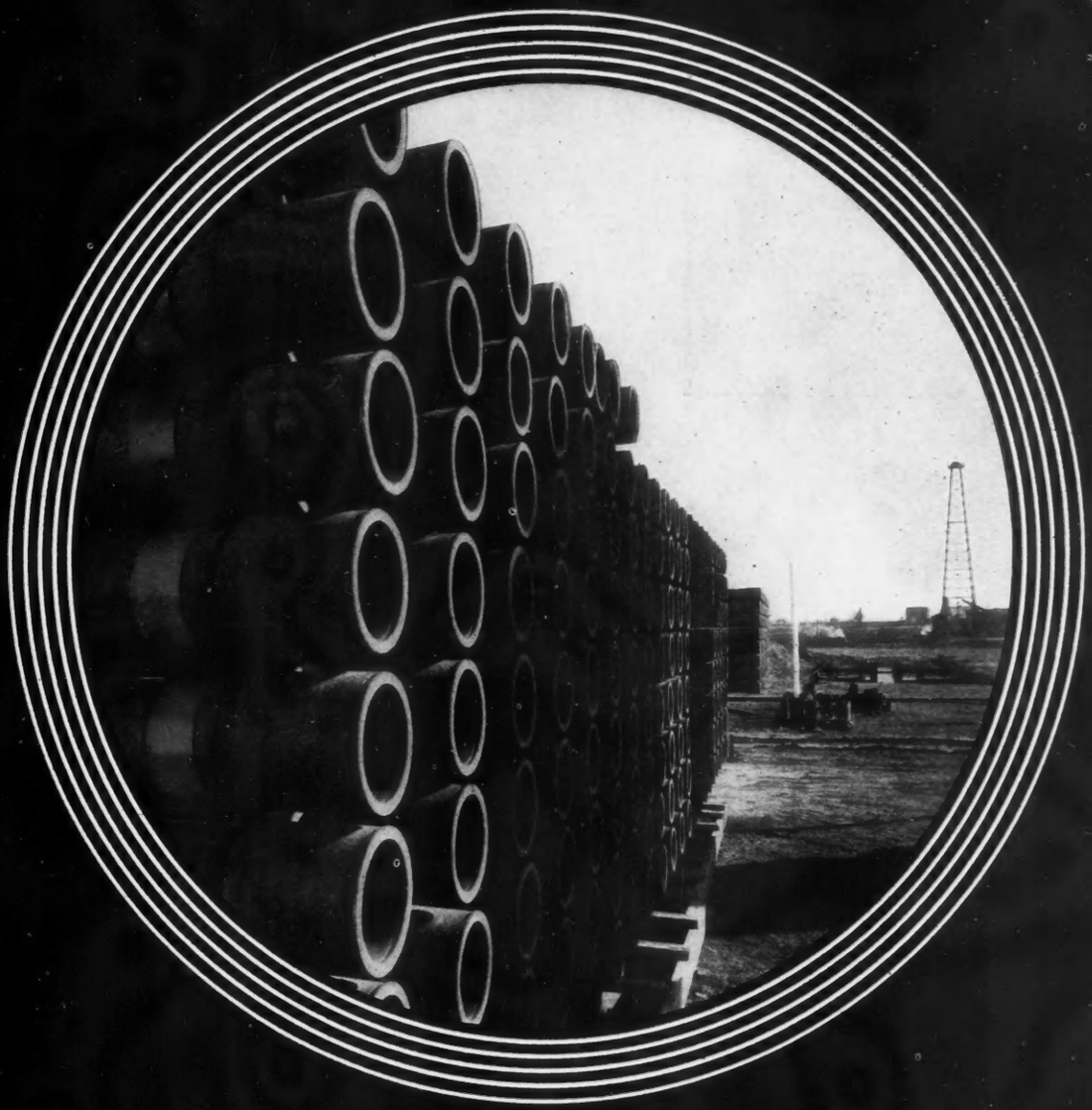
Where weak and strong wells are flowing into a gathering system, regulation of the flow from each well is difficult. The company allows the compressors to reduce the pressure on the main suction line to a point that will permit the weak wells to flow into the gathering system. The strong wells might tend to fill the line under such a practice, but through close regulation with valves the strong wells can not furnish a large volume of gas against the heavy pull of the compressors. Obviously the weaker wells are allowed to produce into the suction line at a rate that will give their full allowable. The suction line pressure is at no time high enough to prevent the weak wells from functioning when they are on the line.

Canadian River Gas Company supplies the full gas load for the 22-inch line that extends to Denver, a distance of 352 miles. The average winter load is 60,000,000 cubic feet and the summer load about 36,000,000 cubic feet. Three 1000-horsepower compressors are used. The suction line pressure varies from 180 to 200 pounds, while the discharge pressure is about 380 pounds.

Panhandle Eastern Pipe Line Company has developed an efficient field gathering system that touches all parts of the northern Panhandle area. A simple Christmas tree arrangement is used to regulate the flow of gas from the wells, a side gate serving as both pressure regulator and volume control. Four- and six-inch well lines are used, the size of the line depending on the nature of the well and the location. Four-inch flow lines are used if the wells have a potential under 15,000,000 cubic feet, six-inch for wells with potentials up to 55,000,000 cubic feet, and occasionally eight-inch lines are used if the potential is greater. Meters are located as near the wells as practical. In working under rock pressures ranging from 350 to 400 pounds, there was at one time a tendency to freeze in a pinch gate controlling the volume output. With gas leaving the well head at temperatures ranging from 65° to 70°F., the pinch gates controlling the volume usually will handle any volume before the gas cools sufficiently to freeze. Rate of production and the pressure drop determine the method of handling gas at the average producing well.

This company's field laterals are six-, eight, 10- and 12-inch lines. The main gathering lines are from 12 to 18 inches in diameter. All of these lines feed the main 20-inch line, which carries the gas under field

# YOUNGSTOWN



GREATER CARE cannot be given than YOUNGSTOWN devotes to producing Oil Country Tubular goods which are unvaryingly uniform and in strict accordance with the most rigid specifications. It is manufactured with a thorough understanding of the conditions it must meet in both installation and service.

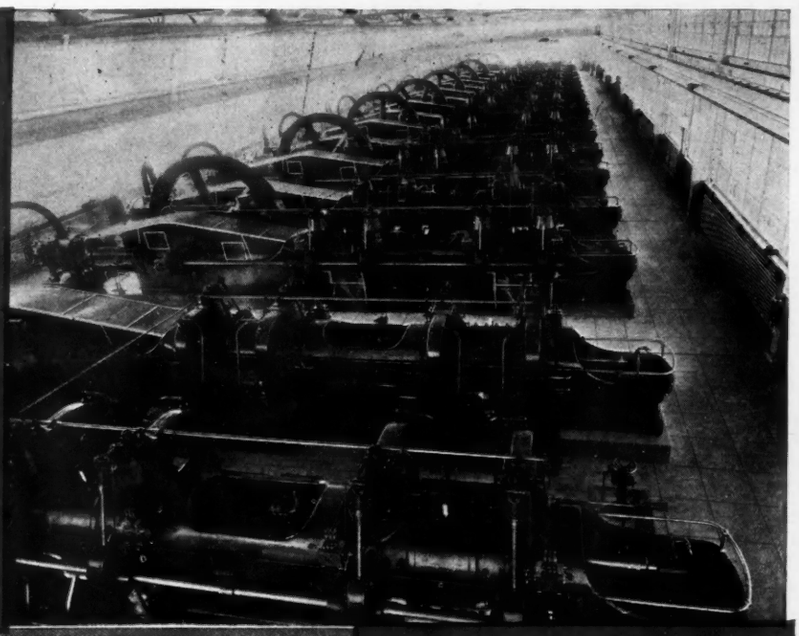
OIL COUNTRY TUBULAR GOODS
TRADE MARK
YOUNGSTOWN

THE YOUNGSTOWN SHEET AND TUBE COMPANY
Manufacturers of Carbon and Alloy Steels
General Offices - YOUNGSTOWN, OHIO

Youngstown's Pipe is distributed by --
THE CONTINENTAL SUPPLY COMPANY, Dallas, Texas
CONTINENTAL EMSCO CO., INC., 30 Rockefeller Plaza, New York City
REPUBLIC SUPPLY CO. OF CALIFORNIA, Los Angeles
THE YOUNGSTOWN STEEL PRODUCTS CO., Dashwood House, Old Broad Street, London, E. C. 2, England

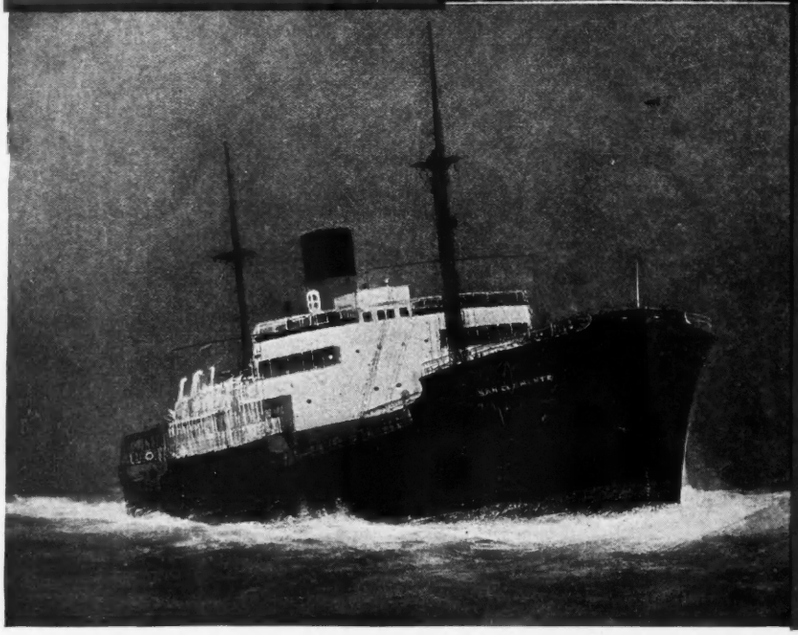
TUBULAR PRODUCTS; SHEETS; PLATES; TIN PLATES; BARS; RODS; WIRE; NAILS; CONDUIT; UNIONS; TIE PLATES AND SPIKES.

# ON LAND



Wherever piston power is generated or utilized throughout the diversified industries of America—there you will find American Hammered Piston Rings serving best and saving most.

American Hammered Piston Rings in these ten 1000-horsepower Cooper Gas Engines at the Munce Compressor Station of the Arkansas-Louisiana Pipe Line Company show little wear after approximately six years of service.



# AND SEA.

Experienced marine engineers that "sail the seven seas" swear by American Hammered Piston Ring performance. Mr. C. Nyberg, Chief Engineer of the S/S "San Clemente" writes: "It is my honest opinion that they are the best rings on the market."

On long runs—or short—American Hammered Piston Rings are giving the utmost in economical service and dependability.

## There is an American Hammered Piston Ring in Every Size . . . of Every Type . . . for Every Purpose

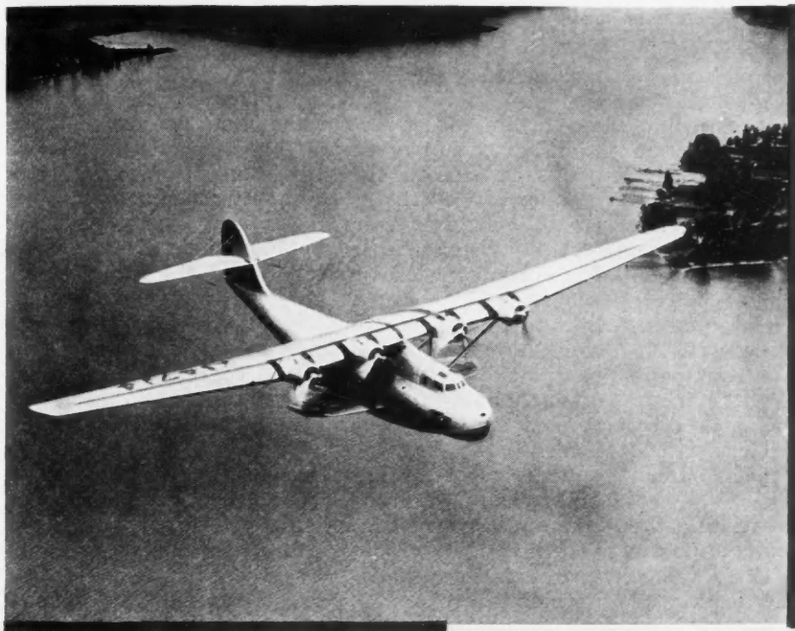
On land and sea, under the sea, and in the air—wherever piston power is utilized—there you will find American Hammered Piston Rings doing the tough jobs easily and economically.

Whatever the requirement in piston ring service, the headquarters and field staff of American Hammered Piston Ring Engineers can help you to find the right answer. Put your piston ring problems up to us.

In the interest of more dependable and more economical piston ring service, send today for a free copy of the American Hammered Engineers' Handbook. In addition to valuable engineering data on piston rings—it illustrates and describes the complete line of *hammered* piston rings—with tension that *can't wear out.*

AMERICAN HAMMERED PISTON RING CO.
*Division of* The Bartlett Hayward Company
"Serving Industry as Founders and Engineers since 1832"
BALTIMORE, MARYLAND

# American Hammered



# AND IN THE AIR

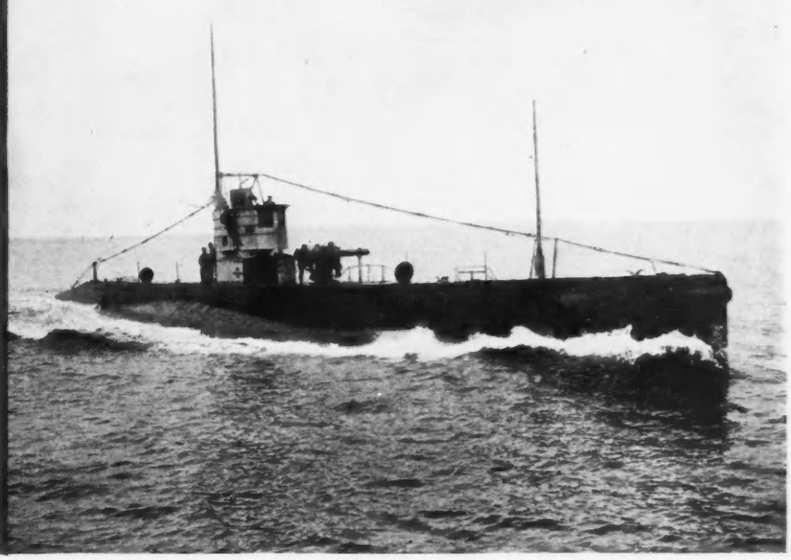
Service in the air calls for the most exhaustive tests of the equipment being considered. "American Hammered" passes all tests with flying colors—whether made as a pre-service requirement or in actual usage.

The "China Clipper"—completed by the Glenn L. Martin Co. for the Pan-American Airways System—is the biggest plane ever built in America. Its Pratt & Whitney Engines are American Hammered equipped.

# ..UNDER THE SEA

Under-water service doesn't daunt so staunch a product as American Hammered Piston Rings. They thrive under the severe conditions of submarine service.

The submarine of the U.S. Navy illustrated was built by the Electric Boat Co. of Groton, Conn. The Diesel engines operating this submarine—also built by Electric Boat Co.—are fully equipped with American Hammered Piston Rings.



*Angle Joint Ring*

*Step Seal Ring*

*Cronin Inner Seal Ring*

*Wide Channeled Oil Ring*

*Special Beveled and Grooved Oil Ring*

# PISTON RINGS

pressure to Liberal, Kansas. In one instance two wells are only three miles apart, but it is necessary to drive more than 65 miles between the wells. The Canadian River flows between the wells and absence of bridges prevents a more direct passage between River Gas Company are doing the bulk of drilling these two producers. The wells are scattered over an area 35 miles long and 20 miles wide.

Other companies with large field gathering systems or compressor stations, or both, are Northern Natural Gas Company, United Gas Company and Lone Star Gas Company. The Northern Natural Gas Company gathers the load for its large line supplying Omaha, Minneapolis, St. Paul and other large cities. This company's average winter load is around 70,000,000 cubic feet daily. Lone Star Gas Company gathers and takes a large quantity of gas from the east side of the field, the greater part being used by Fort Worth, Dallas and other North Texas cities. Several shorter gas lines supply cities in Texas, Oklahoma, Kansas and New Mexico.

It is the practice of all companies operating in the Panhandle to locate check valves at strategic points in gathering and lateral line systems. These valves usually are located immediately adjacent to the well meters, on the downstream side of the meter. Near the major lateral junctions, it is customary to insert a check valve in the gathering line. A number of gathering line junctions are also equipped in the same manner.

Although Phillips Petroleum Company does not independently operate large transmission lines for supplying outside demands, this operator handles by far the largest volume of gas in the field. The connected sweet gas allowable during March was about 80,000,000 cubic feet daily, all of which was intended for gasoline plants. The company's sour gas allowable during March was 233,000,000 cubic feet daily, most of which was processed by gasoline plants. The company operates one of the most extensive networks of gathering lines ever built to handle natural gas.

The field was discovered in 1918. Gas production has been more than 4,000,000,000,000 cubic feet, and at the present rate of production the field should easily meet daily requirements for another 15 or 20 years. Important field extensions have been made during the past two years, and other extensions are expected. The original gas reserve was estimated at 16,000,000,000,000 cubic feet.

Texhoma Natural Gas Company and Canadian for natural gas in the partially developed areas, while Phillips Petroleum Company is actively completing its gas drilling program in the Sunray area, Moore County, to supply carbon black and carbon black plants at Sanford. Phillips is also connecting on a number of wells between Sunray and Sanford to increase its present volume.

Although gas carried by Panhandle Eastern Pipe Line Company loses its identity at the Illinois-Indiana state lines, it may be sent through connecting lines to Philadelphia and New York City. The direct connection with the Columbia Gas & Electric Company makes possible an almost complete distribution of Panhandle gas to eastern states that formerly depended on Ohio, Pennsylvania and West Virginia fields.

A 24-inch high pressure pipe line costs more to build than a railroad, where the average type of country is traversed. When a pipe line is completed and buried, it presents a much less impressive picture than a well-ballasted railroad, but the latter can be built for 10 or 15 percent less than the former, except in rough districts. A pipe line right-of-way, particularly that of the line that is not a common carrier, costs a very high figure, since the average property owner asks and gets much more than the land is worth when a pipe line crosses his property.

Gas waste in the Texas Panhandle has been enormous, but through recent regulation this waste has been almost completely eliminated. Only two or three gasoline plants show a definite gas waste. At one time as much gas as was utilized was wasted.

The large reserve of sour gas in the area has attracted carbon black manufacturers who have erected plants all over the district. By far the greater part of the world supply of this commodity is manufactured in the Texas Panhandle. Many new uses have been found for carbon black and the demand is much greater than a few years ago. About 30 percent, by weight, of an automobile tire is carbon black.

Conservative drilling in the Texas Panhandle has permitted only a limited number of producing wells, and regardless of the great waste in the past, the area will remain the world's No. 1 reserve for many years if reasonable care is exercised in the future.

**Laying the 20-inch main gathering line that feeds Phillips Petroleum Company's 24-inch Sunray-Sanford line.**

# 3 HAYSTELLITED BITS *drill* 4,536 ft.

**. . no reaming necessary**

IN a well at Tomball field, Texas, these three bits drilled from the 958 ft. level to a depth of 5,494 ft. in 103 hr. Bit No. 1 made 3009 ft. in 60 hr. Bit No. 2 in a little over 33 hr. made 1140 ft. Bit No. 3 drilled the final 387 ft. in 9½ hr. All three bits were hard-set with Haystellite inserts and faced with Tube Haystellite. No reaming was necessary before the casing was set. The hole was out-to-gauge all the way down.

This is typical of the results that you too can expect when you use Haystellite inserts and Tube Haystellite according to the simple procedures explained in "Haynes Stellite Products in the Oil Fields." This valuable 36-page book is available to you without cost or obligation. Write for a copy today.

PRODUCT OF A UNIT OF UCC UNION CARBIDE AND CARBON CORPORATION

HAYSTELLITE TRADE MARK REG. U.S. PAT. OFF.

*The cast Tungsten Carbide diamond substitute*

## HAYNES STELLITE COMPANY

*Unit of Union Carbide and Carbon Corporation*

UCC

Chicago - Cleveland - Detroit - Houston - Los Angeles - New York - San Francisco - Tulsa

*General Office and Works*—Kokomo, Indiana

*Foreign Sales Department*—New York City

*Haynes Stellite Welding Rods and information on other Haynes Stellite Products also are available through the 42 apparatus shipping points of The Linde Air Products Company*

**A DEFINITE PROCEDURE PLAN MAY BE THE OUTCOME OF NEW EXTENSIVE**

# *Study of Salt Water Problems*

By FLOYD SWINDELL, Staff Writer

ALONG with the approximately 650,000 barrels of oil being produced daily in Kansas and Oklahoma, operating companies are called upon to dispose of more than 1,000,000 barrels of salt water per day. The disposal of this waste is a problem of such magnitude the industry as a whole has long considered its satisfactory solution beyond the realm of economical procedure. Yet each barrel of salt water brought to the surface increases lifting costs due to larger volume of fluid to be handled, and usually raises the cost of processing the oil to make it marketable, and moreover is the cause of operation delays, lost production and replacement resulting from corrosion. When it reaches the surface it becomes a potential damage claim and threatens the good will which every producing company desires in its dealings with the public.

About two years ago the production division of one of the large companies decided that an effort would be made to correct, in so far as economically justifiable, this condition; which, if susceptible to exact analysis, would prove to represent a sizeable percentage of the total operating costs of most oil companies. Since the condition had been prevalent in field operations for many years, it was realized that much additional work would be necessary and that only through the closest cooperation with the field forces could the company hope to attain a satisfactory result.

The first step was the preparation of a manual entitled "Pollution—Its Relation to the Oil Industry and to the Welfare of Your Company." This was distributed to all employees connected with the operation of properties. Within a few months after distribution of the manual many of the most aggravating conditions were well on the way to correction.

### Definite Program Adopted

A preliminary study of the problems revealed the cost of water disposal would be in excess of the amount that had been accruing annually in damages; therefore, that the solution must necessarily entail net revenue other than through the elimination of damage claims. A further and cooperative study of the problem by the engineers of the division revealed the fact that, through a careful analysis of the salt water produced, a determination could be made as to whether this water might be in condition to return to the formation as a flooding agent; also, that if not in condition in its natural state, what treatment, that would fall within the limits of economy, would be necessary to properly prepare it. These studies led to the adoption of a definite program as outlined below:

1. The Engineering Department prepares a pollution project map[1] obtaining information from the land department with reference to property ownership and royalty interests, and from the geological department information with reference to structures and structural conditions. Copies of the project map and information are mailed to the legal, claims and operating departments.

2. A study is made of the log of each well to determine possibilities of plugging off bottom hole water.

3. A study is made of the general structural conditions, property and royalty ownership for the purpose of choosing a well or wells for salt water introduction so that a systematic and orderly encroachment of water may be artificially obtained to thoroughly cleanse the producing formation.

—[1]See Figure 1.

4. Should a project involve the rights of other interests, an agreement is made for cooperative operation.

5. Should the amount of water be such that the evaporation expense would be small, shallow ponds of relatively large area are so constructed that the bottoms are impervious and the dykes low so that maximum evaporation may be obtained from exposure to winds and sun.

6. Should the formation be such that water cannot be economically introduced or, should the attempt to obtain cooperation of other companies on large projects fail, and should the amount of water be such that it cannot be economically evaporated, then the advisability of plugging the property should be considered before a final decision is made.

As a preliminary step in the study of the problem a bibliography containing references to several hundred papers on the subject of flooding was prepared. This list was made available to all employees under whose direction the work would be carried out so that any study of waste disposal might be correlated

# CUTS THE CORE OFF

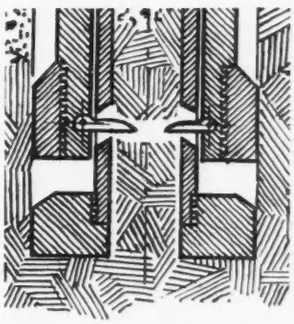
# Clean

## AT THE DRILLER'S OPTION

Here are illustrations made from actual unretouched photographs of a small section of hard rock cores severed by the Dean catcher dogs. Note the clean cut through these tough cores. The marks of the catcher dogs are clearly defined. The cutting operation is accomplished by a slight lift of the drill; the pump pressure forcing the catcher dogs into the hardest core; and continued rotation of the drill cutting the core off clean. The driller can open or close the core catcher by pump pressure at any time. After severing the core the catcher dogs will support any core that can get into the core chamber, assuring complete recovery of all formation cut.

Dean Core Drills are manufactured for drilling holes from 5⅝" to 27" in diameter; with standard 20-ft. barrels. Special sizes and lengths supplied on special order. Write for illustrated bulletin.

*Hard rock cores severed by the Dean catcher dogs.*



*Dean Core Drill with rock head, showing catcher dogs in fully closed position.*

*Catcher dogs in fully closed position; showing how they make a clean cut through the hardest core.*

**DEAN CORE BARREL**
**MANUFACTURING SALES & SERVICE**

3200 Alameda Boulevard — Route No. 2, Box 3200 — Compton, California

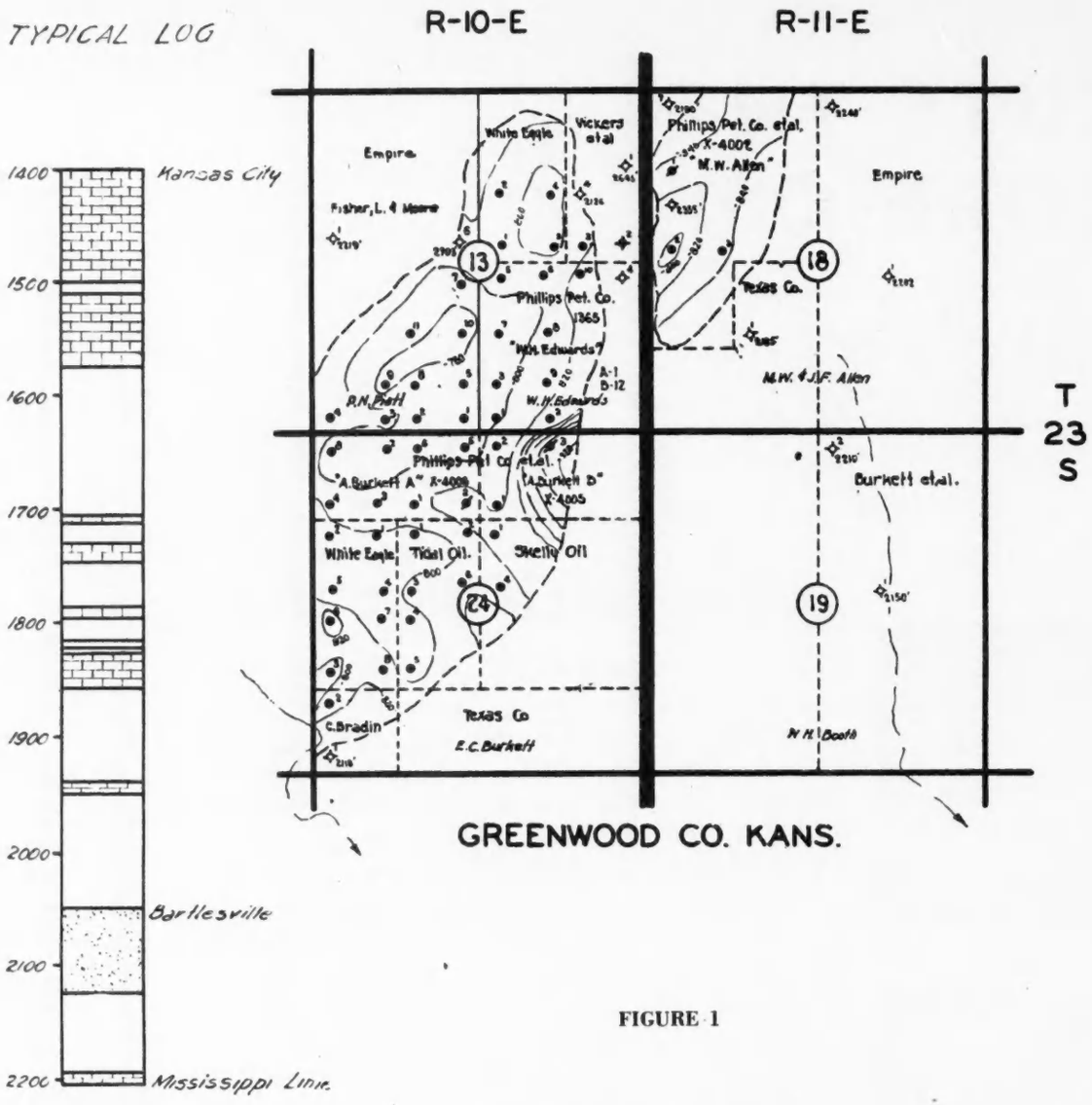



FIGURE 1

with the available knowledge concerning introduction of water into productive or barren horizons.

Property pollution was divided into two general classes:

1. Pollution of property on which oil is produced.
2. Pollution of property other than that upon which oil is produced.

Property pollution of the first class is an operating problem into which enters the engineering of selection of methods and materials and proper construction and installation. After construction and installation, the problem becomes wholly one of supervision, and with the proper supervision this class of pollution can be almost entirely eliminated. The second class of pollution is intricately involved and is an engineering and legal problem. This class of pollution is incident to the disposal of waste in excess of the amount which can be successfully disposed of on the property upon which it is produced, and is the source of damage claims by tenants, private property owners, municipalities, etc., the aggregate amounts of which involve millions of dollars.

On November 30, 1934, a meeting was held in Tulsa for the purpose of discussing informally a possibility of curtailment of oil field waste and pollution generally throughout the Mid-Continent area. Representatives of 11 companies agreed that much could be done through cooperative effort and several plans were suggested. One week later a similar meeting was held. In order that the program become operative it was decided that each pool should be considered as a separate unit, and that it would be the right and duty of that company which opened a pool in areas where water production might be anticipated to call a meeting of all the companies interested in that pool for the purpose of immediately considering the method to be used in the disposal of production waste. It was further decided that in pools which had already been developed, the problem should be handled in a similar manner.

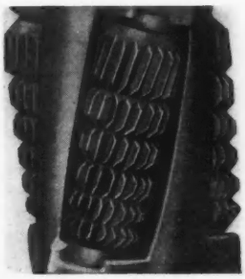
In initiating its own plan the production department of Phillips Petroleum Company selected 40 projects in Oklahoma, 22 in Kansas and 15 in Arkansas, Texas and New Mexico. Salt water survey maps were required from all the company properties. These survey sheets, illustrated by Figure 2, show the name of the lease, county, state, description of the lease, working interest owned, daily production of oil and water, location of wells and tankage. Polluted drainage, fresh water drainage and lease waste running over the surface are shown

# "WE'VE USED ALL KINDS OF REAMERS...

## *And the GRANT REAMER is our choice from now on!"*

### "The shape of the cutters and the angle at which they are set in the body make cutter rotation positive . . .

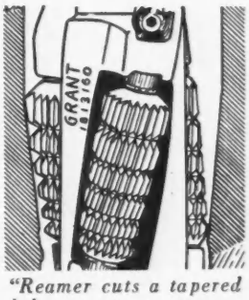
The helical cut teeth of a Grant Reamer cutter act like sharp little paddles when they contact the formation. When the drill pipe is rotated the sharp, interrupted teeth have plenty of traction to make the cutters turn. When the reamer is being run in the hole the cutters rotate on the sliding contact with the formation because they are set on an angle and the teeth dig in the formation just the same. This eliminates a common cause of flat cutters and saves us a lot of money.



*"Positive cutter rotation—reduces possibility of flattened cutters — increases reaming efficiency . . ."*

### "Grant Reamers run smoother because the cutters turn more . . .

At first we didn't believe any reamer could run so smooth and do a real reaming job. After a while, though, we found that no matter how hard the going was, a Grant always made the job look easy. These helical tooth cutters both shear and chip the formation as the drill pipe is rotated, and their efficiency in reaming is proved by the evenness with which they wear.




*"Reamer cuts a tapered hole . . . cutters never contact the wall uselessly . . ."*

### "It cuts the hole to full gauge in all types of formations . . .

Another thing we noticed was that the cutters of a Grant Reamer are inclined two ways in the body. The bottom part of the reamer cutter is inclined inward toward the center of the body and leads when the reamer rotates. The reamer cuts a tapered hole. In this way the bottom part of the cutters meets the formation first and every inch of the length of the cutters does its full share of the cutting work, until the hole is finished out to gauge by the top part of the cutters. No part of the cutter ever rotates uselessly against formation.

*"Helical-tooth cutters wear evenly—last longer, save money—"*

### "It's the safest reamer to use because . .

a Grant runs so smoothly it doesn't put any extra torsional strain on the drill pipe. Due to the fact that the bottom part of the cutters leads, a Grant Reamer tends to *lift* as it rotates rather than to jam itself and the bit down into the formation with an unknown force. By constantly lifting in this way, it keeps the drill pipe in compression—one of the best safeguards against twistoff—and enables the driller to gauge his drilling weight correctly."

*You, too, ought to find out about this Grant Reamer that has so many boosters. Send the coupon, or write today to the . . .*

## GRANT OIL TOOL CO.

**2042 East Vernon Ave., Los Angeles, California**
**3001 Navigation Blvd., Houston, Texas**

*"See your 1936 Composite Catalog—pages 534-535."*

**Grant Reamer**

**GRANT OIL TOOL CO.**
**2042 East Vernon Ave.**
**Los Angeles, California.**

***Please send me full information about Grant Reamers.***

*Name*.....

*Company*.....*Position*.....

*Address*.....

.....

# GRANT REAMERS

by colors or symbols. Any pertinent remarks are included at the bottom of the sheet. On all projects where immediate work could be started pollution project maps, illustrated by Figure 1 herein, were prepared. These maps show property lines, names of operators and farms, and structure contours for the various areas selected, along with a typical formation log of each. Principal drainage lines also are shown.

In all projects where, from a study of the geologic and other conditions, introduction of the salt water back into the producing horizon seemed advisable, samples of the water were taken by the field forces and analyzed in the company laboratories. The following is a typical report on a water analysis

**Memorandum**

Producing Division
January 3, 1935

Re: Salt Water Disposal
Project No.....
..... County, Okla.
By: General Laboratory
C.L.P.

Presented in this memorandum are results of an investigation to determine whether or not it would be practical to dispose of the brines of this project by injection into an oil-producing formation.

Only one sample was received from this project. Complete chemical data as well as the description of the sample are given in the following table:

**Analysis (in Parts per Million) of Brine from Project....., .....County, Oklahoma**

| Description | Taken At Receiving Tank | |
|---|---|---|
| Section | 15-27n-5e | |
| Gravity | 1.1396 | |
| | **P.P.M.** | **Percent** |
| Total solids | 181,130 | 100.00 |
| Sodium and Potassium | 52,502 | 28.99 |
| Calcium | 14,202 | 7.84 |
| Magnesium | 2,121 | 1.17 |
| Chlorides | 112,294 | 62.00 |
| Bicarbonates | 9 | 0.00 |
| Sulfates | 2 | 0.00 |
| Notes | Iron present | |

The chemical characteristics of this brine are almost identical with brines sampled on Project No. ..... This brine contained considerable iron in solution.

When this brine is exposed to air, the iron is gradually precipitated as iron oxide. If such brine were injected into an oil-bearing sand, the pores of the formation are apt to be plugged by the precipitated iron oxide.

In order to overcome this possibility it is suggested that the brine be treated with sodium hydroxide solution before injection. The sodium hydroxide solution not only precipitates the iron but raises the pH value of the brine thus tending to reduce the possibility of corrosion.

In treatment of this nature the sodium hydroxide should be dissolved in fresh water and this solution slowly added to the brine. The brine should be agitated during the addition of the sodium hydroxide solution. A ten percent solution of sodium hydroxide can be prepared by dissolving 35.7 pounds of sodium hydroxide in a barrel (42 gallons) of fresh water. With joint aeration and precipitation, 10 pounds of flake sodium hydroxide (11.8 gallons of 10 percent solution) per 100 barrels of brine should be the maximum amount to use. By using the above charge, the cost of sodium hydroxide per 100 barrels of input brine would be approximately 30 cents, assuming the cost of sodium hydroxide to be $3.00 per 100 pounds. . . . (End of memo).

In this extensive and pioneer undertaking the company has started on the premise that conditions in many fields and on many leases in the same field will not be favorable to the introduction of brine back into the production horizon. The undertaking is one, however, which bids fair to render a great public service as well as to save the operating company many thousands of dollars and it deserves the whole-hearted support of the industry. One outcome undoubtedly will be a much closer study of the porous formations at the time they are drilled, so that upper beds adaptable to disposal will be known previous to the appearance of brine in a producing area. Such a knowledge would be of inestimable value also in the identification of sources of salt water when it appears in a field.

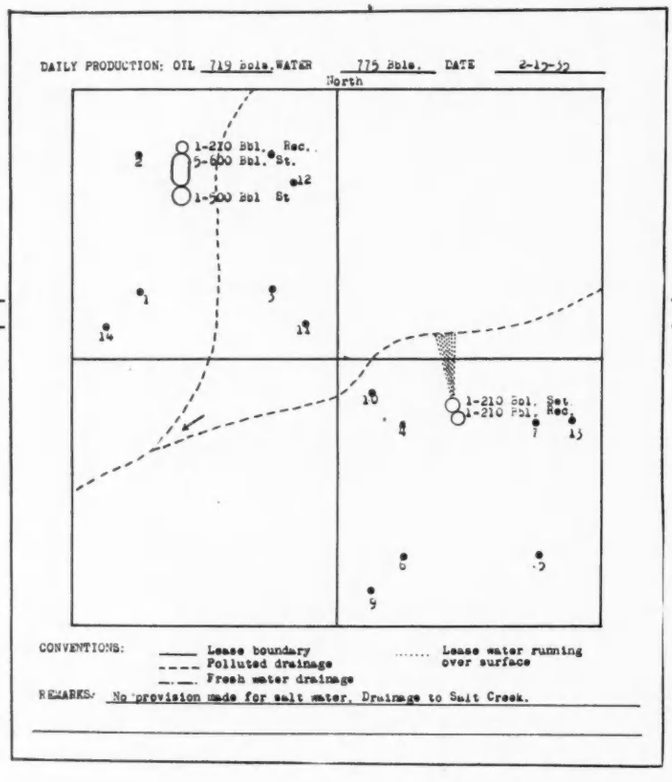
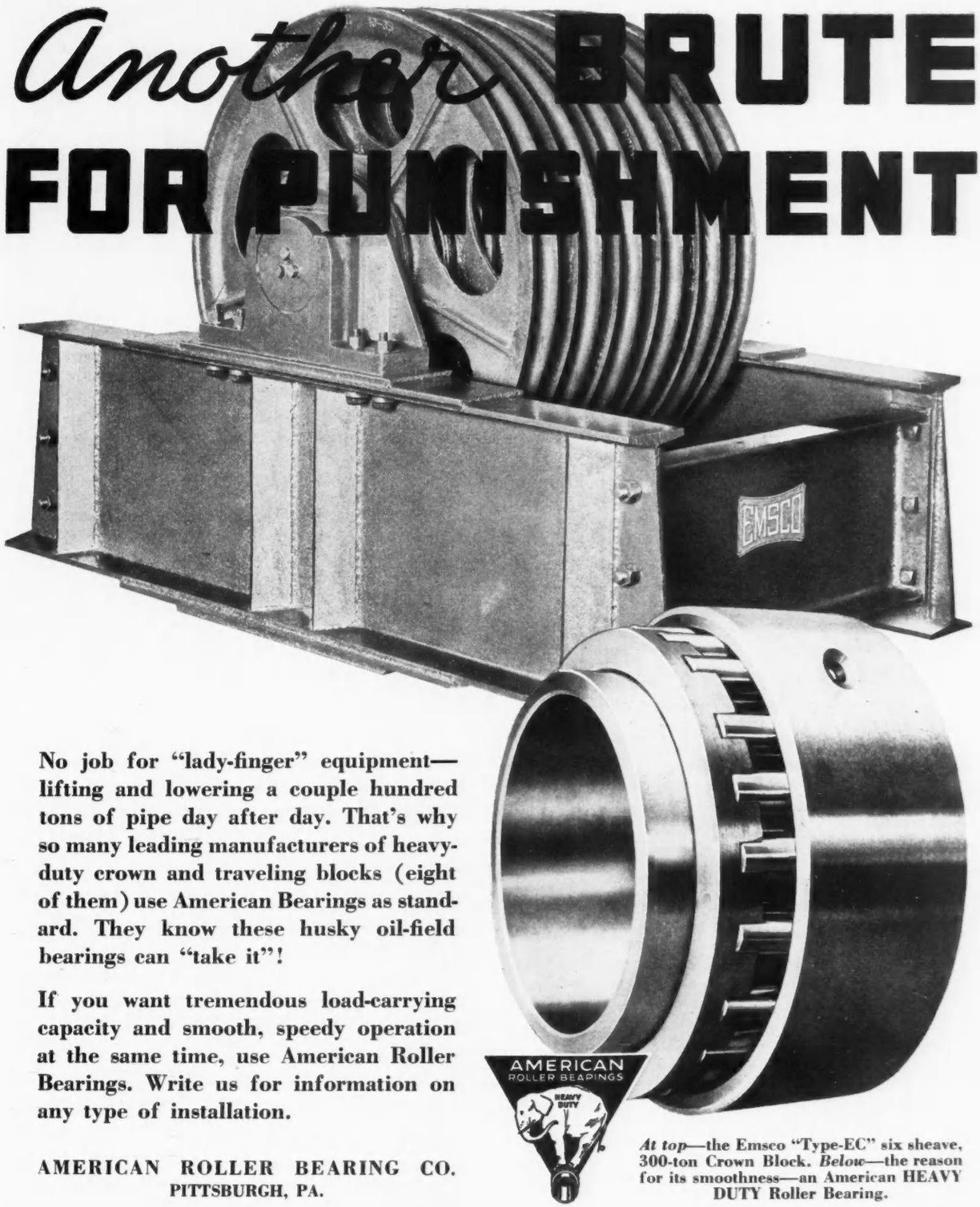



**FIGURE 2**

# *Another* BRUTE FOR PUNISHMENT




**No job for "lady-finger" equipment—lifting and lowering a couple hundred tons of pipe day after day. That's why so many leading manufacturers of heavy-duty crown and traveling blocks (eight of them) use American Bearings as standard. They know these husky oil-field bearings can "take it"!**

**If you want tremendous load-carrying capacity and smooth, speedy operation at the same time, use American Roller Bearings. Write us for information on any type of installation.**

**AMERICAN ROLLER BEARING CO.**
**PITTSBURGH, PA.**

AMERICAN ROLLER BEARINGS HEAVY DUTY

***At top*—the Emsco "Type-EC" six sheave, 300-ton Crown Block. *Below*—the reason for its smoothness—an American HEAVY DUTY Roller Bearing.**

# ★ AMERICAN ★

## Heavy Duty ROLLER BEARINGS

# *Water Knockout*

## FITTS WELLS HAVE WATER REMOVED BY SIMPLE BUT EFFICIENT DEVICE

By JOHN C. ALBRIGHT

A NUMBER of wells in the Fitts field, Pontotoc County, Oklahoma, are making free water along with the oil produced. Engineers of E. H. Moore, Inc., conceived the idea of separating the fluid from the crude between the christmas tree and oil and gas separator. Accordingly, a knockout unit of simple design that has proved quite effective was designed. The water produced falls out quite rapidly, despite the high flowing pressures and temperatures encountered.

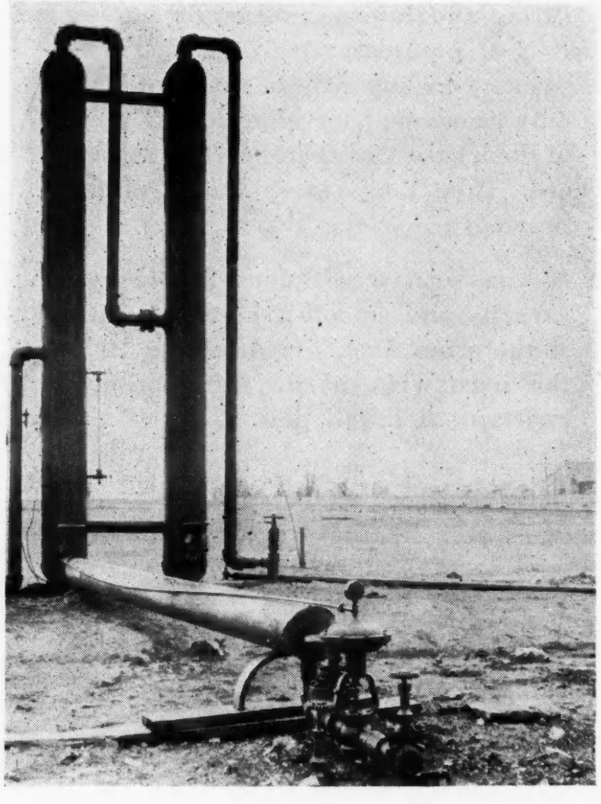
The knockout unit when installed and balanced is automatic in operation, requiring very little attention from the lease operator. Several joints of different size pipe are used in constructing each knockout unit. Two of the pipe joints are 20 inches in diameter and are full length. Inexpensive welds are used to close each end of these two joints of pipe, which are placed in a vertical position.

One of the joints, the one through which the fluid flows first, is equipped with a float unit similar to types used on oil and gas separators. The float, placed inside the chamber, is of the remote control type, operating the outlet valve which is placed some distance from the vertical chamber through which the water passes and is finally disposed of. The first chamber was equipped with an overhead three-inch line through which the oil and gas passes to the second chamber, built similarly to the first, but without a water float unit. The oil and gas passes through the second chamber, after entering at the mid-section, and leaves at the top, as in the first chamber. The two units are fastened to each other by welding three-inch pipe sections near the base and near the top, and were assembled at the shop before transporting the well where they were set up.

As the water flows from the tubing head christmas tree, regulated by the customary flow bean, it enters the first section of the knockout above the float mechanism. The free water immediately settles to the base of the chamber and is kept at a constant level in the base of the chamber. A gauge glass with fittings is attached to the chamber in order that the lease employees might determine if the water was being removed at the desired rate.

The first chamber is fitted with a three-inch nipple welded to the base so a horizontal chamber can be attached to serve as an additional reservoir for the water before it is finally released to the sump for evaporation and final disposition. This horizontal reservoir is made by using a full joint of 10-inch pipe with the automatically controlled outlet valve attached to the outer end. The inlet, or connection to the vertical chamber in which the oil and water are separated, is made to the upper side of the horizontal pipe, while the outlet is made on the lower side. The outer, or remote controlled valve end of the horizontal pipe is supported so it will be lower at the outlet end than at the inlet, but water is maintained at a level that the horizontal pipe is always full of water, and the vertical chamber is approximately one third full.

The second vertical chamber has a gate drain at the lower end so what water that may be carried over from the first may be drawn from it by manual operation of the valve. The conventional oil and gas separator is set beyond, or down stream, from the water knockout, and pressure is taken from the gas line to operate the remote controlled drain valve on the first vertical chamber. It is reported by engineers with E. H. Moore, Inc., that the water knockout serves its purpose admirably so long as sufficient pressure is maintained upon the flowing line from the tubing head christmas tree.



**Water knockout unit being used by E. H. Moore, Inc., in the Fitts field.**

**GARDNER-DENVER COMPANY**
102 Williamson Street, Quincy, Illinois
DALLAS HOUSTON KILGORE TULSA LOS ANGELES

*Oil Country Offices:*

**CONTINENTAL SUPPLY COMPANY**
Continental Building
Dallas, Texas

**EMSCO DERRICK & EQUIPMENT CO.**
6811 South Alameda Street
Los Angeles, Calif.

# GARDNER-DENVER

# *Equipment Displayed*

## AT HOUSTON SHOW INCLUDES ARRAY OF STANDARD AND SPECIALTY PRODUCTS

THOSE who attend the Seventh Annual Oil Equipment and Engineering Exposition from April 20 through April 25 at Convention Hall, Houston, will see an array of oil field specialties and standard equipment and processes representing advanced ideas in design and operating technique.

### Transportation and Power Units

Transportation and power units, portable and fixed, constitute one of the most interesting, as well as one of the most prominently displayed, phases of the exposition. There are slow and fast tractors, big and little tractors, and tractors equipped in many ways for the multitudinous jobs of the production, pipe line, and transportation divisions of the industry. Some are equipped with single-drum winches, some with double-drum winches. And several are equipped for drilling and pulling rods and tubing.

Power units, portable and for permanent installation, most of them featuring convertibility to Diesel fuel when desired, are displayed in an attractive manner. Along with the power units shown are some well servicing units featuring portability, strength, braking efficiency on the drums, and draw works designed to fall within the eight-foot road limit.

### Drilling Specialties

Bailers, fishing tools, wall hooks and related equipment comprise an important part of the exposition. There is an expanding pin tap made for left-handing or backing off, strings of drill pipe stuck in tight holes when a tool joint or coupling is up. There are releasing spears and sockets for recovering casing or pipe, or for setting liners and other holding jobs. There is one spear exhibited for use with any kind of a rotary jar.

Among other drilling specialties shown are drill pipe, casing, tubing, bits. Among these may be seen a new type casing designed to be rotated like drill pipe when drilling through heaving shale. Some of the tool joints shown are those with threads cut after hardening. Crown blocks designed to conserve space and minimize wear on wire rope by utilizing large sheaves and special bearings are among the drilling equipment shown. Narrow traveling blocks of new design featuring increased strength and lessened bulk may be seen at the same booth.

Drilling chains for practically every power combination of light, medium and heavy rigs, powered by steam, gasoline, Diesel, or electricity, are displayed. One manufacturer shows a bailer designed to perform several functions in connection with drilling whereas another has a coring outfit working in a demonstration of actually taking a core from the earth at Convention Hall.

As usual at such expositions, display of the modern methods of cementing and recently developed appliances for use in connection therewith form an important part of the show.

Instruments for well surveys and for determining conditions of holes form interesting exhibits. One instrument for directionally surveying the hole and another for determining the drift are shown. The latter employs photography in recording data. Along this same line there is another instrument exhibited for measuring economically the depth of holes.

### Control Equipment

There may be seen quite a collection of cellar control valves, flow beans, landing heads and similar production equipment. One large cellar control gate displayed is designed to make it possible to tube wells under heavy gas pressure and make water shut-off tests.

At least two manufacturers will show visitors mud screens. One of these screens features a non-whipping cloth and a curved screen surface. The other features a finely meshed screen which cuts out coarse cuttings and sand. In another part of the hall will be seen a mud testing apparatus, which is a filter press designed to duplicate as nearly as possible bottom hole conditions with regard to temperature and pressure and to determine the effects thereof on drilling muds.

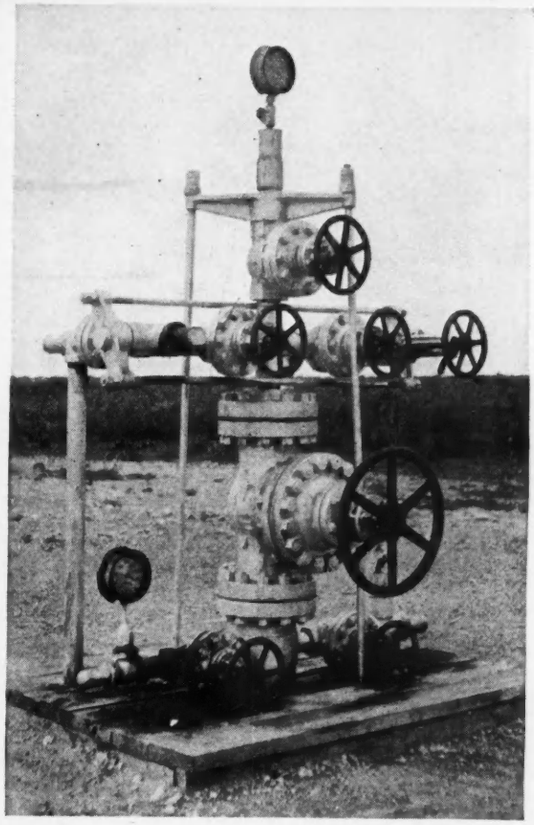
Pumping units, compressors and pumps displayed unfold new developments in these lines. There are power unit pumps driven by any type of prime mover, and there are units installed on the same set of skids with the prime mover, which is permanently connected thereto. In addition to these, there are pump assemblies for working at the bottom of the well, that is, insert and plunger pumps.

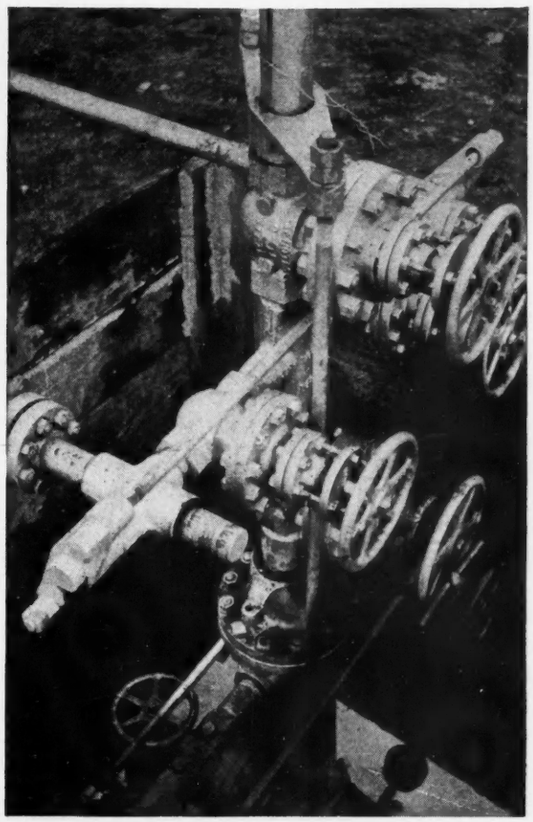
Safety equipment, such as gas masks, combustible gas indicators, hose masks, respirators, oxygen breathing apparatus, hydrogen sulphide detectors head protectors, inhalators, first aid kits, snake bite kits, sirens and derrick slides are prominently displayed.

Other equipment and things one may see at the show include: special purpose paints, swabs, pillow blocks and various types of bearings, a mechanical boiler cleaner, lighting equipment, piston rings, and burners for boilers of various types.

For the benefit of engineers unable to attend the Seventh Annual Oil Equipment and Engineering Exposition, **The Oil Weekly** presents on the following pages a detailed description of practically every piece of equipment displayed at the show. These data also serve as a guide for those attending.

KEROTEST





## FOR 100% RELIABILITY MAKE YOUR XMAS TREE ASSEMBLY 100% KEROTEST!

Don't make your well head a miscellaneous aggregation of valves, fittings, unions and nipples. Centralize the responsibility with Kerotest. This provides a perfect system of well control where each and every part has been specially designed to serve its particular job and where each part co-ordinates perfectly with all other parts.

A 100 percent Kerotest Assembly thus definitely assures you that the weak links have been eliminated and that the "bugs" have been removed before it is offered to you.

Furthermore, you know that each part is definitely the same high quality materials throughout—selected by experience and test as being the most suitable for the purpose required.

So—for a Xmas Tree that will be free of all regrets, make it 100 percent Kerotest Valves, Kerotest Cast and Forged Fittings, genuine Kerotest Heat Treated Ring Joint Flange Unions and Control Chokes, coupled together with perfectly threaded heat treated nipples, properly assembled and thoroughly tested in accordance with the world-renowned Kerotest standard of quality and workmanship.

**KEROTEST MANUFACTURING CO.**
Pittsburgh Pennsylvania

KEROTEST

# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## A. C. Horn Company

### ▪ *Special Purpose Paints*

A. C. Horn Company, Houston, displays at the show a complete line of paints and associated supplies for various uses in the production, pipe line, refining, and marketing branches of the industry.

For boilers and stacks there are exhibited the following types of paint: heat resisting aluminum, heat resisting black, boiler and stack paints, and "Hornseal" for setting.

For wooden bunkhouses and buildings there are exhibited gas proof paint for exteriors and oil flat paints, enamels and varnishes for interiors.

For use on cement, concrete and masonry there are shown the following general types: paints and waterproofings for floors, foundations, walls, joints and piers, surface hardeners, calking compounds, waterproofing against pressure, aluminum paint, expansion joint cement, pore sealer, and drying accelerators.

Protective and decorative coatings for engines, compressors, pumps, derricks and general metal surfaces are also displayed, as are paints, primers, and coatings for tanks, pipe lines, pump stations and associated equipment.

For the refining and marketing branches of the industry Horn exhibits paints for use on wood, metal, and masonry surfaces, including heat and pressure resisting paints. Also a full line of concrete cleansers is shown.

## The Charles N. Hough Mfg. Company

The Charles N. Hough Manufacturing Company, Franklin, Pennsylvania, is exhibiting at the Oil Equipment and Engineering Exposition its complete line of balls and seats, working barrels, working valves, insert pumps, and related equipment.

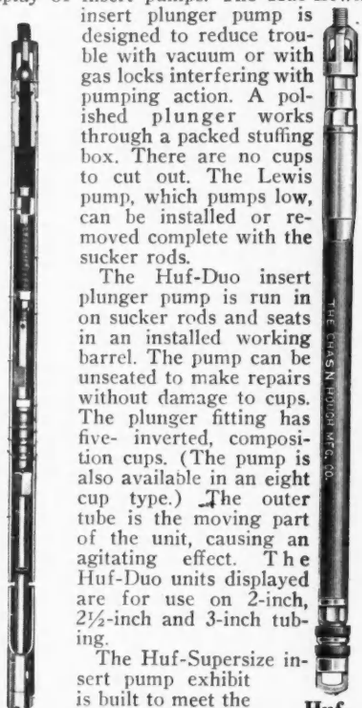
### ▪ *Balls and Seats*

Balls and seats exhibited by The Charles N. Hough Manufacturing Company include the "Steelex," "Repelex," "Bronzex," "Resistex," and "Combinex." As the trade names indicate, they are for use under five conditions. "Steelex" is for use where sand conditions are bad; "Repelex" resists corrosion and the cutting action of sand. "Bronzex" is for use where lodestone or other elements which act on steel are in the water, or where there is alkali in the oil or water. "Resistex" is to contend with combined sand abrasion, lodestone, acid and alkali conditions. "Combinex" is a combination "Steelex" seat and "Bronzex" ball. The bronze ball will not magnetize, according to the manufacturer, and the seat will endure the action of floating sand.

**Hough Ball and Seat**

### ▪ *Insert Pumps*

Three types are included in Hough's display of insert pumps. The Huf-Lewis insert plunger pump is designed to reduce trouble with vacuum or with gas locks interfering with pumping action. A polished plunger works through a packed stuffing box. There are no cups to cut out. The Lewis pump, which pumps low, can be installed or removed complete with the sucker rods.




**Huf-Lewis Plunger Pump**

The Huf-Duo insert plunger pump is run in on sucker rods and seats in an installed working barrel. The pump can be unseated to make repairs without damage to cups. The plunger fitting has five- inverted, composition cups. (The pump is also available in an eight cup type.) The outer tube is the moving part of the unit, causing an agitating effect. The Huf-Duo units displayed are for use on 2-inch, 2½-inch and 3-inch tubing.

**Huf-Duo Insert Pump**

The Huf-Supersize insert pump exhibit is built to meet the demand for an oversize, maximum capacity, liner type working barrel. The manufacturer claims it will handle 20 percent more fluid than the regular insert pump.

The Huf-Stripper insert pump displayed is designed for wells of small production, or for use where it is desired to pump wells steadily. It is made in two sizes: one-inch for two-inch tubing, and 1⅜-inch for two-inch tubing.

### ▪ *Working Barrels and Valves*

The Hough booth includes a display of seamless steel working barrels and working barrel valves. The former are made to A.P.I. specifications and are furnished in all sizes with smooth inside finish. Also Hough shows bronze, cast iron, and chrome plated working barrels. Working barrel valves shown vary in type and size, ranging from seven-eighths-inch to 3¾-inch for tubing made of steel or bronze.

## The Burt Corporation

### ▪ *Swab*

The Burt Corporation, Tulsa, Oklahoma, is exhibiting the Burt swab. This equipment is designed to meet existing field conditions of today. It is of forged steel body exclusively. The swab rubber is compounded expressly for swabs. It is oil and abrasion resisting. The swab is simple and automatic in its operation.

## Reda Pump Company

### ▪ *Pumping Units*

Reda Pump Company, Bartlesville, Oklahoma, displays two complete pumping units assembled with the idea of taking care of East Texas pumping conditions, a packer adapter for potential taking on combination Reda and gas lift, and a 75-horsepower Reda motor.

The Reda pumping unit is comprised of three major parts: electric motor, protector, and centrifugal pump. The unit operates at the bottom of the well. Capacities of the pumps range from 150 to 5000 barrels daily, with lifting ability ranging down to 7000 feet.

### ▪ *Packer Adapter*

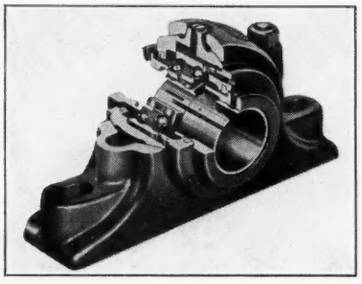
The packer adapter shown by Reda is for potential taking on the combination Reda and gas lift. The packers are grooved to allow the cable to pass through. They serve an intermediate role in utilizing gas in production. The Reda unit lifts the fluid above the packer, and the compressed gas lifts the fluid from the packer to the surface.

In addition to the above, Reda Pump Company shows one Reda 75-horsepower motor.

## Ahlberg Bearing Company

### ▪ *Pillow Blocks*

Ahlberg Bearing Company, 317 East 29 Street, Chicago, Illinois, has on display three lines of ball bearings, but features the new ball bearing pillow blocks.



**Ahlberg Pillow Block**

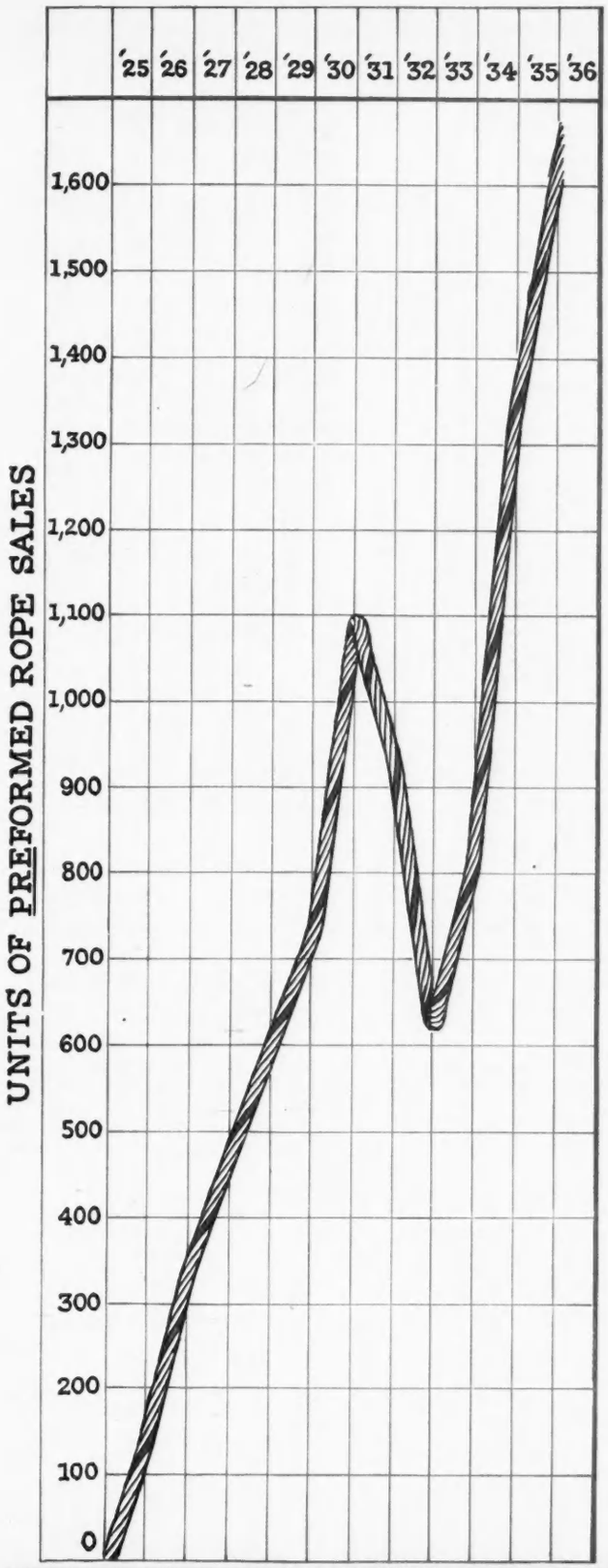
The pillow blocks have a new method of locking the bearings to the shaft, and are available in two types having a total of nine capacities for a given shaft size. They range from the lightest high speed units to the heaviest.

### ▪ *Ground Bearings*

Ahlberg Bearing Company also displays at the exposition ground bearings which have been reconditioned to standards of new ball bearing manufacture. Ball tracks of worn bearings are ground and polished to provide new surfaces. Oversize balls and a new ball retainer are fitted, making the complete bearing approximate the condition of a new one.

### ▪ *Ball Bearings*

The third line of display at this booth consists of CJB Master ball bearings, which are claimed to be precision made. They are exhibited in standard single row, angular contact double row, and self-aligning types.




# TRU·LAY's ACCEPTANCE

## *since 1924*

GREEN SIGNIFIES SAFETY

TRU-LAY Preformed wire rope was introduced to American industry in 1924. It represented the first basic improvement in wire rope in nearly one hundred years.

The preforming process made a superior rope . . . a rope which commanded widespread attention and rapid acceptance. In units of sale the graph shows exactly the degree of this acceptance. As you look at the chart please remember that this phenomenal rise was attained in spite of a premium price and the business depression.

Today TRU-LAY Preformed is the accepted standard of excellence in wire rope for literally thousands of rope users. Under our exclusive patents 78 wire rope manufacturers throughout the world are now licensed to make and sell preformed rope. Without exception these licensees are feeling the rapidly growing demand for preformed rope. TRU-LAY Preformed is one of the outstanding successes in recent industrial history. You, too, will find it pays to specify TRU-LAY Preformed.

**AMERICAN CABLE COMPANY, Inc.**
**Wilkes-Barre, Pennsylvania**
**An Associate Company of the American Chain Company, Inc.**

*In Business for Your Safety*

***District Offices:*** **Atlanta, Chicago, Detroit, Denver, New York, Philadelphia, Pittsburgh, Houston, San Francisco**

## TRU·LAY *Preformed* Wire Rope

**ALL AMERICAN CABLE COMPANY ROPES MADE OF IMPROVED PLOW STEEL ARE IDENTIFIED BY THE EMERALD STRAND**

## Halliburton Oil Well Cementing Company

Halliburton Oil Well Cementing Company, Duncan, Oklahoma, has on display at the oil show a complete line of cementing equipment as well as a number of other products, but is prominently featuring cement equipment, formation testers, measuring devices, floating equipment, multiple stage cementing, full hole cementing and Four Wheel Drive trucks.

### ▪ *Full Hole Cementer*

When this device is in "closed" position a sleeve covers the cement outlets, the sleeve being held in place by shear pins. Drilling fluid is circulated down through the device to thoroughly wash the space outside the screen. Then a regular two-plug cementing job is done. When cementing, the sleeve is forced downward by the bottom plug, uncovering the cement outlets and allowing the cement to pass through the outlets up into the annular space behind the casing. If an operator desires to use a canvas "shirt tail" packer, it may be attached to the liner just below the full hole cementer. The device permits the installation of the same size screen area, thereby obtaining larger drainage surface.

### ▪ *Howco Lining*

Howco cement lining for screens or perforated liners allows thorough washing of cavings, cuttings and heavy muck from behind screens or perforated liners. It requires no fishing as the material is easily drilled and circulated out of the casing by the tubing or drill stem at the same time the cementing plugs are drilled.

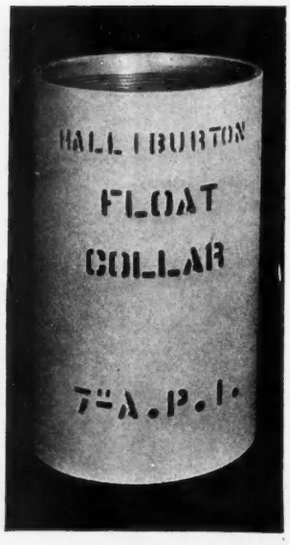
### ▪ *Howco Co-Axial Spiral*

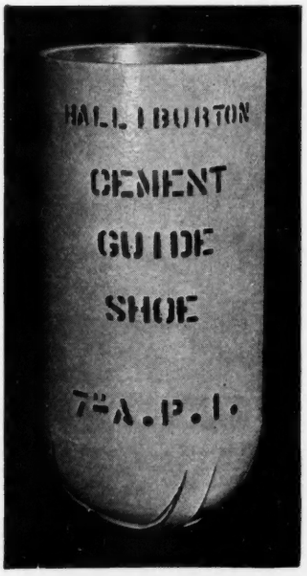
Howco Co-Axial Spiral on display offers an extra degree of protection when completing oil wells. It prevents, according to the manufacturer, channeling outside of casing and protects against blowouts.

**Howco Co-Axial Spiral**

It consists of a triangular rubber molding vulcanized to a metal base. The rubber is attached to the metal by a process similar to that employed by automobile manufacturers in vulcanizing rubber connecting pads used in floating power installations between the frame and motor. The spiral comes in seven-foot sections and is preformed in various sizes to fit over the outside of the casing. It is solid in sets of four seven-foot sections.

Howco Co-Axial Spiral is installed by simply slipping it over the thread end of a joint of casing and attaching it to the casing by arc welding at short intervals. Usually, two sections of spiral may be placed on the bottom joint of casing and the other two may be placed at a suitable point up in the string where it may be desirable to have assurance that the casing is not in direct contact with the wall of the hole.



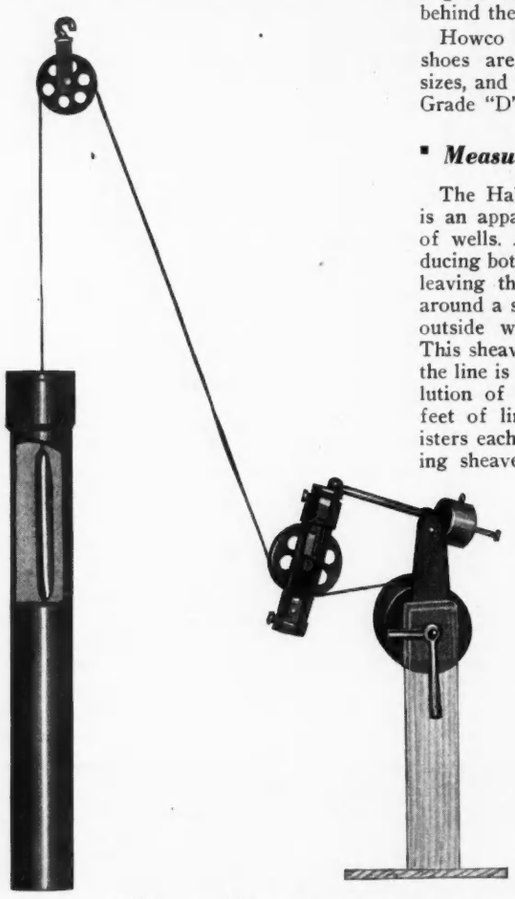




### ▪ *Float Collars and Guide Shoes*

These Howco products have four-way grooves, which lead into the main opening of the float valve or guide, providing emergency passages for the circulating fluid or cement. The guide will not interfere with coring through or immediately below the shoe.

By spacing the float collar one joint above the guide shoe in a string of casing, additional assurance is obtained that a good body of cement will be pumped behind the shoe.

Howco float collars and cement guide shoes are available in standard casing sizes, and furnished with long threads for Grade "D" casing.



**Halliburton Measuring Device**

### ▪ *Measuring Device*

The Halliburton well measuring device is an apparatus for measuring the depth of wells. A round steel line is used, reducing both the weight and the cost. After leaving the reel the line passes entirely around a sheave that is coated around the outside with an extremely hard metal. This sheave is of such diameter that when the line is drawn taut around it each revolution of the sheave passes exactly two feet of line. An automatic counter registers each half revolution of the measuring sheave, that is, counts each foot of line as it passes. The measuring member has two retaining wheels that are adjustable to maintain a slight pressure on the line and prevent any possibility of its slipping on the sheave. By releasing the retainer wheels the line may be removed from the measuring member. The device may be operated by hand or by power.

The stuffing box assembly is a device that screws onto the top of the swedge nipple or casing head. It consists of a grooved sheave over which the measuring line passes, various fittings and a stuffing box through

# HOW TO HANDLE IT

## AND BE READY FOR THEM ALL

## WITH 6 TO 9 OR 10 LINES ON THE BLOCK

MODERN Drilling that finds nine or ten or even up to 13 lines on the traveling block means more severe service for the chain on the draw-works. The load of drill pipe or casing is heavier. Cable speeds are faster. The chains have to carry as much load as before and handle it faster.

**AND DEEPWELL WILL**

The rig equipped with Deepwell is ready to handle the tremendous loads of drill pipe and casing, handle it clean and fast, with the dependability needed when minutes count.

The rig equipped with Rex Deepwell is ready for fast full-time work on any drilling.

Insist on Deepwell on your High-Speed Deepwell rigs.

**CHAIN BELT COMPANY**
**1639 West Bruce St., Milwaukee, Wis.**

**DISTRIBUTORS**

MID-CONTINENT AND GULF COAST DISTRIBUTORS
Frick-Reid Supply Corporation
Lucey Products Corporation — Murray-Brooks Hardware Company, Ltd.
Norvell-Wilder Supply Company — Rex Supply Company — Coastal Supply Company

CALIFORNIA DISTRIBUTORS
The Republic Supply Co. of California

EXPORT
Chain Belt Company, Chrysler Building, New York
Lucey Export Corporation, Woolworth Building, New York
William E. Knight, 2-3 Norfolk St., Strand, London, W. C. 2, England

**THE GREATEST CHAIN THAT EVER HIT THE OIL FIELDS**

REX

CHAIN BELT COMPANY

*Deepwell Chabelco*

**REX CHABELCO 1033—1244 • REX DEEPWELL DW-3—DW-4**

which the line can enter the casing without the well fluid coming out.

### ▪ *Formation Testers*

The Halliburton formation tester is a method for testing the productivity of a formation encountered in a well containing drilling fluid. It involves the insertion of a single string of pipe into the well to make a test, which includes lowering a test string into the well through the drilling fluid with a packer carried by the string and a valve inlet at the lower end of the string closed against the entrance of fluid from the well, setting the packer above the formation, and opening the valve to permit cognate fluid from the formation to enter the inlet, closing the valve to prevent the subsequent entrance of fluid from the well through the inlet and releasing the packer, and raising the test string with the inlet closed against the entrance of fluid from the well to remove an entrapped sample.

### ▪ *Multiple Stage Cementing Device*

This device allows greater facility and success in placing large amounts of cement behind strings of casing. It eliminates the necessity of pumping all the cement down the entire length of pipe and then a considerable distance upward behind the casing. This advantage is particularly desirable when a string of casing is to be cemented from top to bottom. The method is also useful where it is desired to protect a shallow productive formation located behind the casing. Thus, a cementing job may be done around the shoe to obtain the usual water shut off and another job may be done on the same string of casing at a shallower level to provide protection to a productive formation. By this means cement is placed above, below and at the shallower producing formation.

### ▪ *FWD Trucks*

Halliburton Oil Well Cementing Company also is showing FWD trucks, which it distributes. The FWD truck drives through both front and rear wheels. The device that provides the power is the FWD center differential.

## Spang, Chalfant & Company, Incorporated

### ▪ *Pipe*

Spang, Chalfant & Company, Incorporated, Tulsa, Oklahoma, has on display at the show a table exhibit of A. P. I. casing, drill pipe, and tubing, with cut-open sections showing thread form and engagements with couplings and tool joints.

### ▪ *Casing Joint*

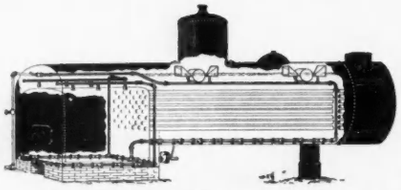
Included in the display is an exhibit of the manufacturer's new high strength, small diameter casing joint known as "Extreme Line." Samples and sections displayed at the booth illustrate the thread form, fluid seal, method of gauging, ease of running, and other characteristics of this joint.

Also shown is a section of drilling casing designed to be rotated like drill pipe for drilling through heaving shale.

## U. S. Oil Tool Corporation

### ▪ *Mechanical Boiler Cleaner*

U. S. Oil Tool Corporation, Houston, Texas, is showing a mechanical boiler cleaner for eliminating scale and removing foam and mud while the boiler is in operation. The unit consists of two floating skimmers located at the top of the water inside of the boiler, and a gathering line located in the bottom of the boiler. The former is connected to an outlet through a second gauge cock, on which is placed a valve outside the boiler. When this valve is opened, internal steam pressure forces all scum from the top of the water through the intake cup on the outlet line. Removing the scum eliminates a great deal of the formation of scale and prevents the foaming condition.



**U. S. Mechanical Boiler Cleaner**

The gathering line consists of a nipple connected series of cast iron crushers, each with an opening in the bottom. When the blow-off valve is opened, internal steam pressure forces all sediment on the bottom of the boiler to the openings in the crushers and from there carries it out through the blow-off, which need be opened only a few seconds at one hour intervals. This carries off mud, sediment and old scale, which has checked off and dropped to the bottom.

The siphon cups installed over the crown sheet take up any sediment around the crown sheet and carry it out through the blow-off.

### ▪ *Slush Pump Valve and Seat*

The company also is showing the full hole slush pump valve and seat. It is constructed without stem at top or bottom. The seat is made without bridge or web, and there are no legs in the bottom of the valve. A greater opening through the valve is provided which decreases the velocity of the fluid at any given pump speed; this diminishes the erosive wear on the valve and seat besides cutting down the head losses that cause wear on pistons and liners.

The valve guide is a cage screwed to the seat after the valve is in place. It is made of steel with a stop at the top to allow the seat to open only the necessary distance for economical operation with slippage.

The metal seating surface is beveled and the insert seats on a flat surface. The rubber insert makes contact with the seat on a large flat surface before the metal part of the valve contacts the seat. The insert is heavy enough to absorb shock.

## Tips Engine Works

### ▪ *Gas Engines*

Tips Engine Works, Austin, Texas, is exhibiting three types of engines, one for a pumping unit, a second which is a Diesel type converted to use natural gas, and a smaller engine convertible to natural gas.

### ▪ *Type GHD*

Type GHD on display is a horizontal engine designed primarily for use as a pumping unit. It is available in 25 and 40 horsepower sizes and features a hand starting unit. According to those at the booth, it can be converted to use kerosene by changing the carburetion. Type GHD is four cycle, heavy duty, slow speed. Design of the engine is such that all parts are accessible for inspection and repairs.

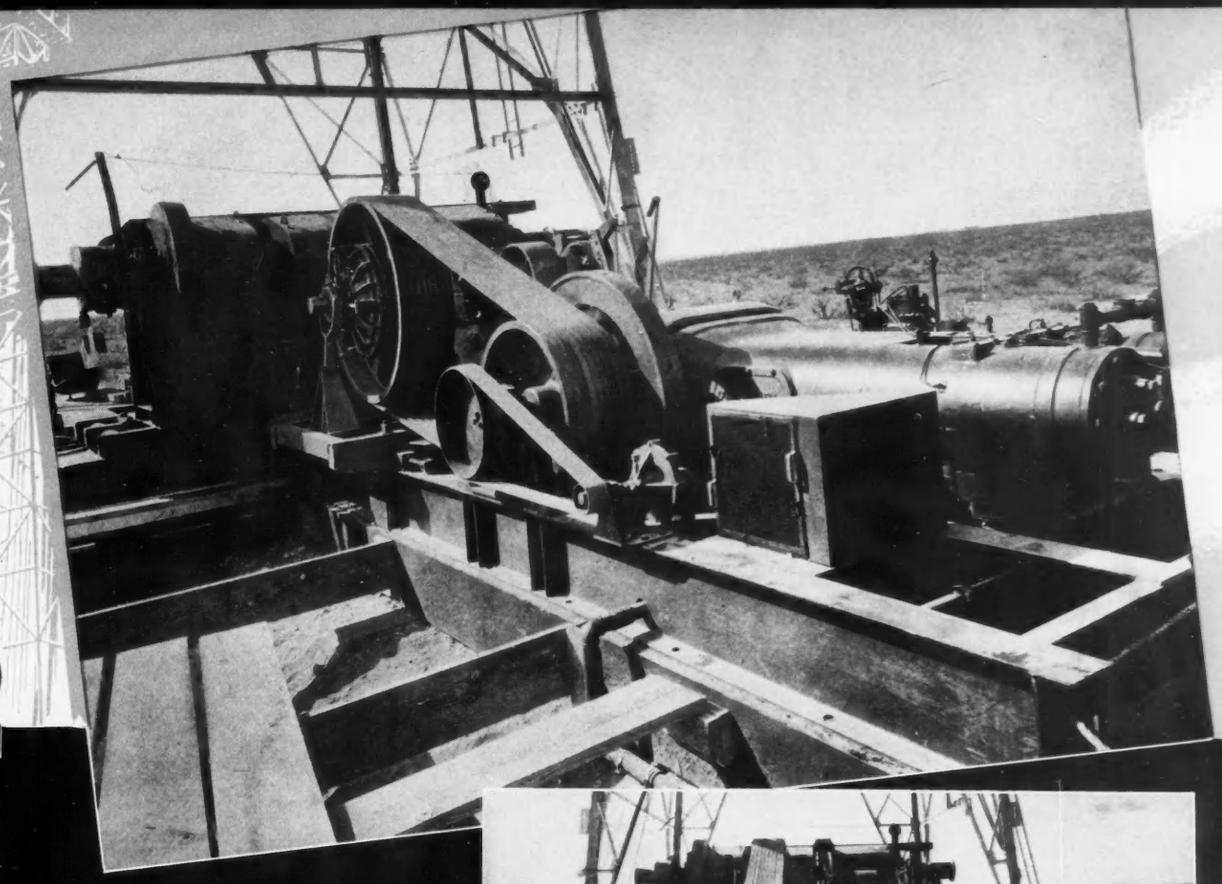
### ▪ *Type GVO*

Type GVO for drilling is made in sizes ranging from one to six cylinder and from 40 to 240 horsepower. It is a vertical design, originally a Diesel type. It has been converted to the use of natural gas, also. Speed of the GVO drilling engine is 327 revolutions per minute.

### ▪ *Type M*

The third engine exhibited by Tips Engine Works is a two cylinder, 50 horsepower engine convertible to the use of natural gas. It is available in 25 and 50 horsepower sizes. It has a 10-inch bore and an 11-inch stroke, and a speed of 450 revolutions per minute. Type M is a two cycle engine with a cubic displacement of 325 cubic inches per cylinder.

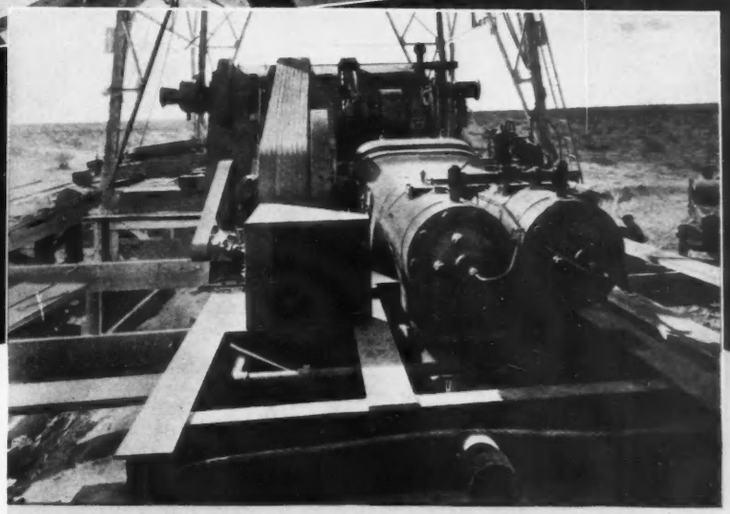
**U. S. Full Hole Slush Pump Valve disassembled.**



Drive side of drawworks unit on West Texas installation.

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936 9TH WORLDS FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 4 TO 23

# FAIRBANKS-MORSE *Continental*



Cylinder end of power unit showing chain drive to drawworks.

## Drilling Contractors

The Fairbanks-Morse-Continental Twin Drilling Engine incorporates all the features of a sturdy, rugged, dependable engine—its simplicity of design makes it easy to understand and economical to operate.

Mounted on portable steel base with fuel, air, water and exhaust auxiliaries completely mounted.

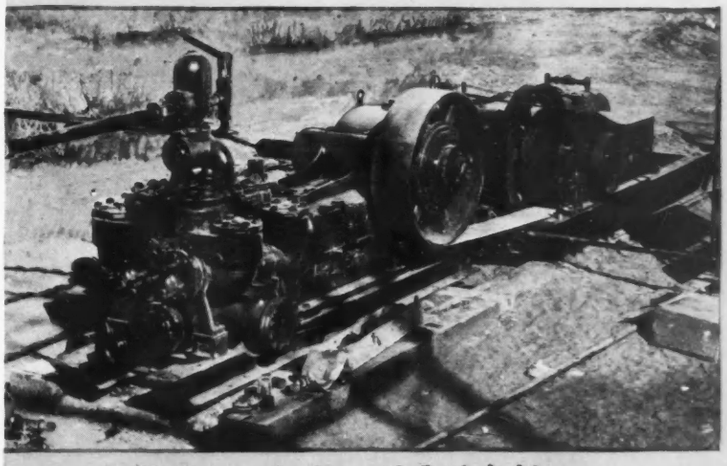
Convertible for Cable Tool or Rotary service.

### DRAWWORKS DRIVE

Engine and countershaft mounted on long base for butting to derrick sill. V-Belt or Flat Belt Drive from engine to countershaft.

### SLUSH PUMP DRIVE

Short base power unit. V-Belt or Flat Belt Drive.



Slush pump hookup with flat belt drive.

**THE CONTINENTAL SUPPLY COMPANY**

General Offices: DALLAS, TEXAS

Export Office: CONTINENTAL EMSCO CO., Inc.
30 Rockefeller Plaza New York City, N. Y.

Representatives:

LONDON MARACAIBO PLOESTI BUENOS AIRES

*"Serving the Oil and Gas Industries"*

# CONTINENTAL

# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## Benjamin Electric Company

### ▪ *Lighting Equipment*

Benjamin Electric Company, Des Plaines, Illinois, is showing a colorful display of open and closed type floodlight equipment for use around a modern gasoline station, in addition to a line of reflectors and one of vapor and explosion proof lighting equipment for use around refineries, drilling rigs, and tank farms. There are also on display a line of dust proof, "Nofuse" panel boards and a complete line of industrial signal and calling devices.

## Shaffer Tool Works

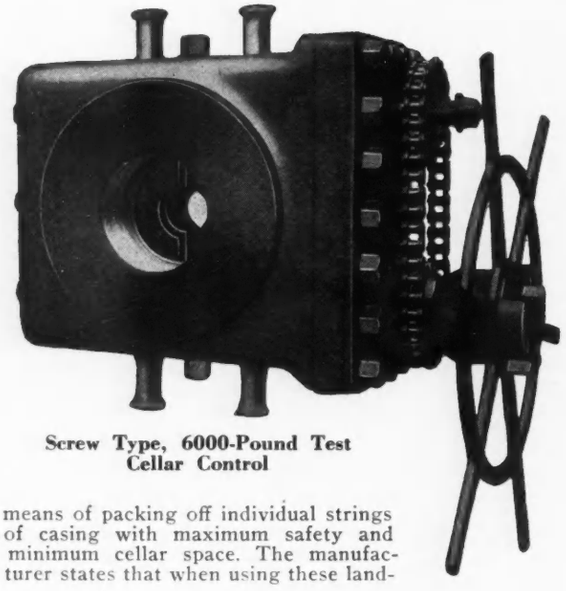
Shaffer Tool Works, Brea, California, is exhibiting a complete line of high pressure equipment and fishing tools.

### ▪ *Cellar Control Gates*

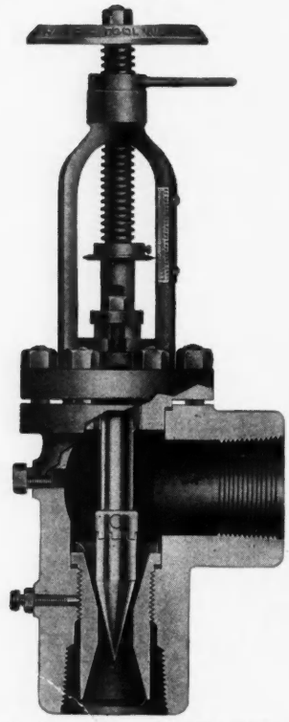
Shaffer cellar control Gates are designed to provide safety against blowouts when pipe is either in or out of the hole. One gate is equipped with rams to close around drill pipe, and the lower gate is equipped with rams for complete shutoff when pipe is out of the hole. The manufacturer claims this makes it possible to tube wells under heavy gas pressure and make water shut-off tests by putting pressure inside the casing. Shaffer Gates are tested to pressures up to 6000 pounds per square inch with an ample factor of safety. It is claimed these gates will close and hold under all conditions encountered in modern drilling. These gates may be operated manually or mechanically.

### ▪ *Spool Type Heads*

The Shaffer spool type landing head exhibited is made in two models, the "A" type for moderately high pressures, and the "B" type for extreme high pressures. These heads provide means of packing off individual strings of casing with maximum safety and minimum cellar space. The manufacturer states that when using these landing heads each individual string is landed at any point without any necessity for "letting go," measuring or rethreading; each string is supported on its own flange with an upper flange provided for the support of the next string; each string is suspended on its own set of slips with no accumulation of weight put on those slips by subsequent strings of casing and tubing; and that each string is packed off securely against high pressure with provision for gas outlet, mud line or overflow as required.



**Screw Type, 6000-Pound Test Cellar Control**



**Shaffer Adjustable Flow Bean**

### ▪ *Adjustable Flow Beans*

The patented Venturi tube is a feature of the Shaffer adjustable flow beans for controlling the flow of fluid and regulating the pressure and rate of flow to the closest degree possible. The beans are used for holding back pressure on circulating fluid during drilling. They are adaptable as mud valves and work well under high pressure.

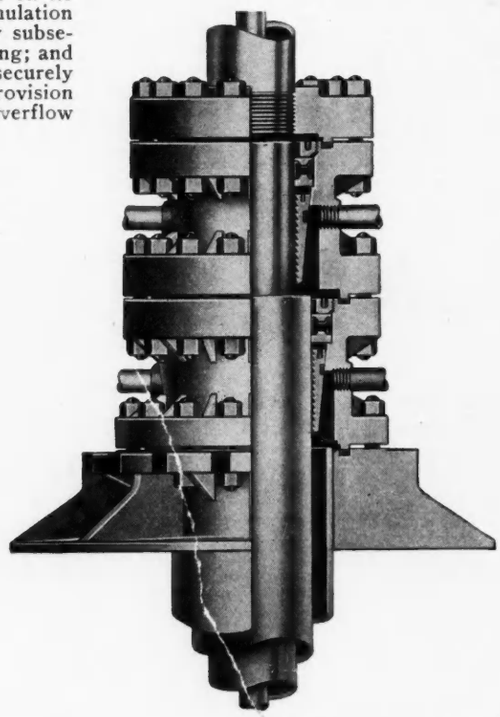
Type 34 M. P. Shaffer adjustable flow beans are equipped with flanges and metallic packing offering the advantage of all connections being bolted to conform with the most recent practice in making up flanges with Toncan iron packing rings.

Type 34, Type 34MP and Type 27 are made for pressures up to 5000 pounds per square inch. The East Texas type is designed to control the flow of moderate pressure wells without sacrificing flowing qualities. Replaceable bushings are furnished for high pressure drilling. Micro tips are furnished to secure an equal increase in the opening area for each turn or fraction of turn of the wheel throughout the travel of the tip.

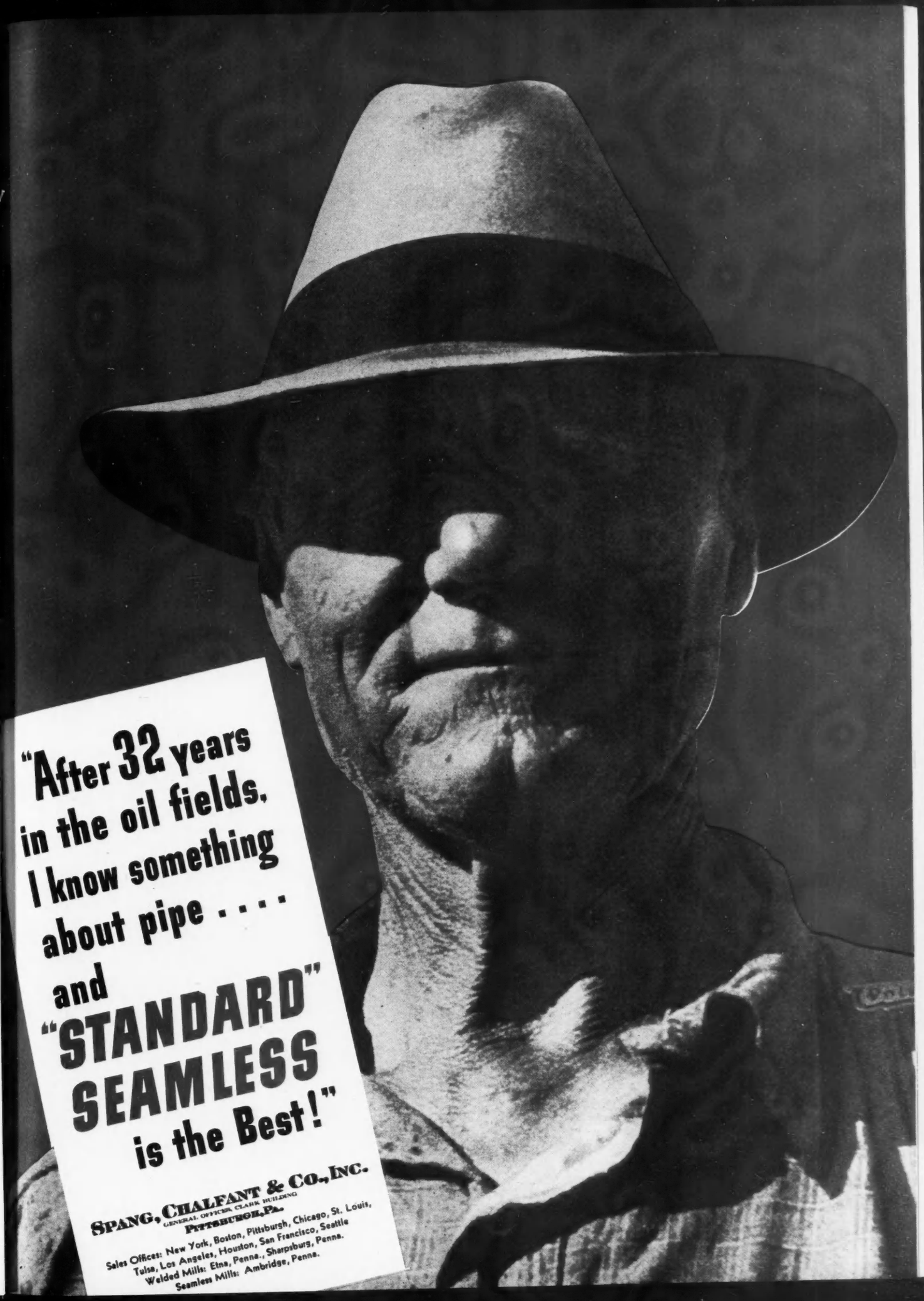
### ▪ *Shaffer Fishing Tools*

Shaffer fishing tools are made of alloy steels, scientifically heat treated and machined after heat treating.

The Shaffer expanding pin tap is made for left-handing, or backing-off strings of drill pipe "stuck" in tight



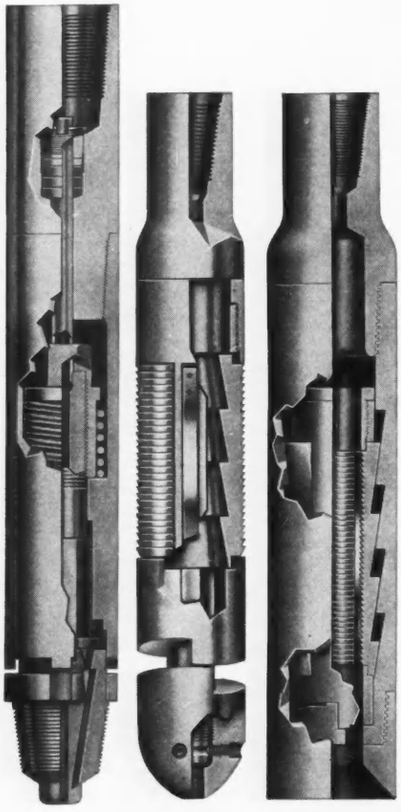
**Spool Type Landing Heads**


"After 32 years in the oil fields, I know something about pipe . . . . and "STANDARD" SEAMLESS is the Best!"
SPANG, CHALFANT & Co., INC.
GENERAL OFFICES, CLARK BUILDING
PITTSBURGH, Pa.
Sales Offices: New York, Boston, Pittsburgh, Chicago, St. Louis, Tulsa, Los Angeles, Houston, San Francisco, Seattle
Welded Mills: Etna, Penna., Sharpsburg, Penna.
Seamless Mills: Ambridge, Penna.

holes when a tool joint or coupling is up.

Shaffer rotary releasing spears are designed for removing casing or pipe; for setting liners, for holding jobs and for use with any type of rotary jar.

Shaffer rotary releasing sockets of the Shaffer-Hamon type are designed for recovering drill pipe, casing, liners, tubing or any type of fish for which a socket may be used. The T. & T. Type of these sockets is recommended for left hand work.



**Shaffer-Hamon Expansion Pin Tap** | **Shaffer-Hamon Rotary Releasing Spear** | **Shaffer-Hamon Rotary Releasing Socket**

## American Hammered Piston Ring Company

▪ ***Piston Rings***

American Hammered Piston Ring Company, Baltimore, Maryland, features at its booth a set of cast iron and bronze piston rings for use in saturated and super-heated steam engines, Diesel engines, ammonia compressors and gasoline pumps.

The most interesting of the rings is the recently developed "Cast Iron Bronze" ring, originally designed for locomotives, but now used to reduce excessive wear on rings and liners in high speed Diesels and steam engines of the oil fields.

## Caterpillar Tractor Co.

Caterpillar Tractor Company, Peoria, Illinois, displays three members of its new Diesel tractor and industrial engine line.

▪ ***Drilling Engine***

Of first interest is its D17000 engine, available either as a power unit or industrial engine, and designed particularly for drilling rigs. This engine is full Diesel, eight-cylinder, V-type, 160 brake horsepower with a governed speed of 850 r.p.m. Bore and stroke are 5¾ inches by 8 inches. The eight cylinders are in two groups of four, set at an angle of 60 degrees. The four-inch, drop-forged crankshaft turns through five main bearings having a combined length of 16 inches. Fuel injection is similar to all Diesel engines of this make. A single row of eight individual fuel pumps is located between the cylinder banks, and all fuel lines are the same length. Fuel and lubricating oil filters, air cleaners, manifolding, cooling and thermostatic control are individually supplied for each cylinder bank. The engine, fan to flywheel, weighs 7150 pounds. It is started by a 28-horsepower, two-cylinder gasoline starting engine of horizontal opposed piston type.

Also on exhibit is the smallest member of Caterpillar's Diesel engine line, the D4400 of 44 brake horsepower, of four-stroke-cycle, four-cylinder design, and with a governed speed of 1400 r.p.m.

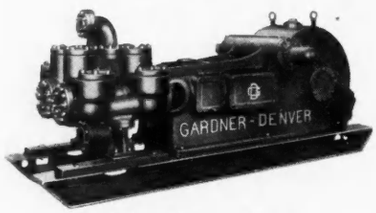
▪ ***Tractor***

The tractor line is represented by the largest Diesel size, the 95 horsepower RD8 model. This machine will handle the largest oil field winch or sideboom, the manufacturer claims. It is four-stroke-cycle, six-cylinder, full Diesel, with a bore and stroke of 5¾ inches by eight inches. It has six speeds forward, ranging from 1.7 to 5.3 m.p.h., and two reverse speeds. Drawbar pull in first speed is 22,490 pounds. The tractor weighs 32,780 pounds.

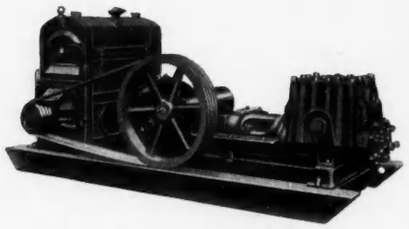
## Gardner-Denver Company

▪ ***Pumping Unit***

Gardner-Denver Company, Quincy, Illinois, is showing one of its gasoline (gas) engine driven pumping units consisting of a Gardner-Denver horizontal duplex double acting power pump, driven by a Hercules engine power unit through a "V" belt drive. Units of this type are used as gathering and small oil line pumps, as well as for water supply to drilling rigs and refineries. The pump is of the removable liner type and may be used for a wide range of pressure and capacity conditions by using various sizes of liners




**FX Type Power Pump**



**Gardner-Denver Pumping Unit**

and pistons. These pumping units may also be furnished with Diesel engine power units.

▪ ***Compressor***

Gardner-Denver's exhibit also includes one of the FX type small line pumps, size 5-inch by 10-inch. This is a recent development, the pump being of entirely new design with oil field type continuous tooth herringbone gears, and special oil stop head and fluid-stop head power end which prevents contamination of the lubricant in the power end. The FX power pump is used as a slush pump for rotary drilling, particularly for portable and semi-portable drilling rigs. The exhibit includes a divided fluid end, especially designed for slush service, this fluid end being typical of the ones used on the FX slush pumps.

## John Zink Company

▪ ***Burners***

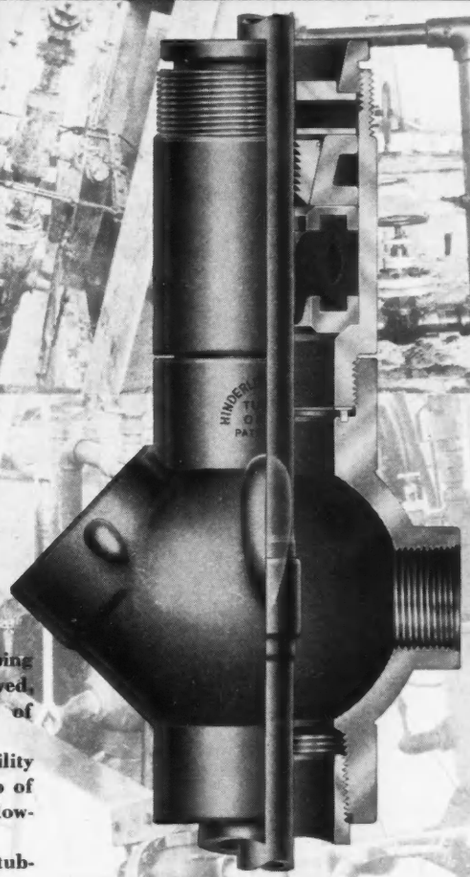
**Zink Burner**

John Zink Company, 4401 South Peoria Street, Tulsa, Oklahoma, is exhibiting a complete line of burners for oil industry use. Included in the display is the following equipment: short flame "Bi-Mix" burners for refinery stills and boilers; a special short flame burner for oil field type burners; burners for low pressure heating boilers; "Ring" type combination oil and gas burners for large refinery stills and power boilers; three types of steam atomizing burners, domestic conversion gas burners, and straightening vanes.

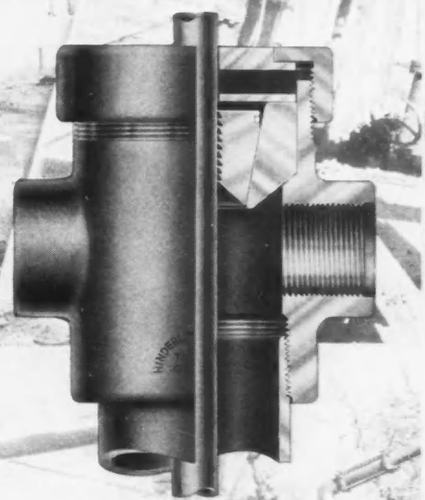
# CASING AND TUBING HEAD EQUIPMENT

## *PIONEERED and PERFECTED by* HINDERLITER

HJ—Bushing Type Casing Support and Packing Head with Lifting Ears.



HYW — Three-In-One Casing Head Hook-Up with Tubing Blowout Preventer.



HW — Two-In-One Casing Head Hook-Up with Wedges.

**The only casing head hook-ups where tubing or casing can be safely lowered or removed, under pressure or otherwise, without loss of well pressure or fluid.**

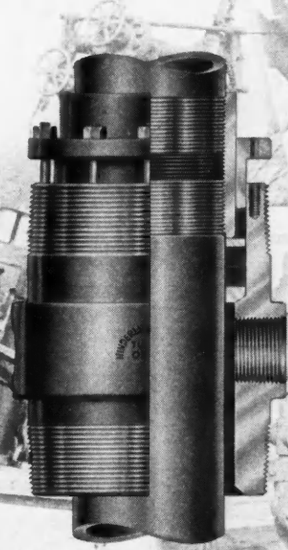
**The greater versatility and interchangeability of Hinderliter heads permits the making-up of the proper combination for any drilling, flowing or pumping situation.**

**Every part of Hinderliter casing and tubing head equipment is scientifically tested during the process of manufacture—contain safety factors not found elsewhere.**

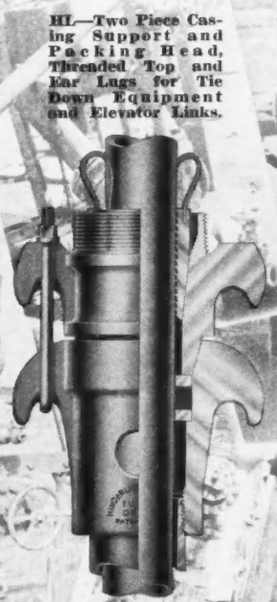
**The heads shown here represent only a small part of Hinderliter Casing and Tubing Head equipment.**

*Sold By Supply Stores*

**HINDERLITER TOOL CO.,**
**1150 N. Peoria, Tulsa, Okla.**

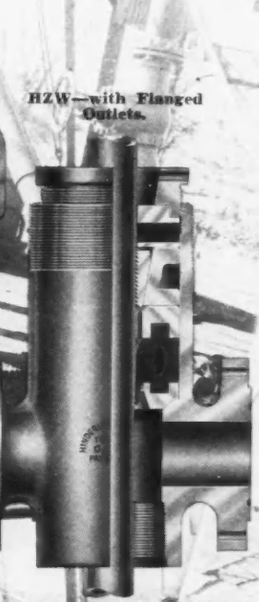


HB—Braden Head with Coupling and Casing Packing.

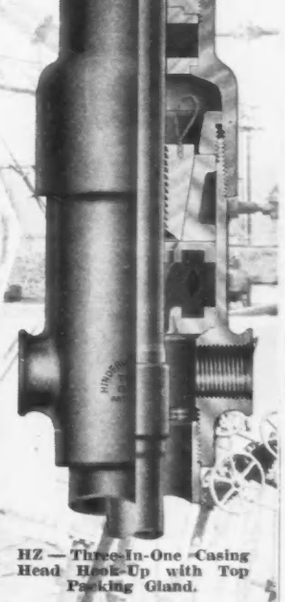


HL—Two Piece Casing Support and Packing Head, Threaded Top and Ear Lugs for Tie Down Equipment and Elevator Links.

HM—Mildren Tubing Support.



HZW—with Flanged Outlets.



HZ — Three-In-One Casing Head Hook-Up with Top Packing Gland.

# HINDERLITER

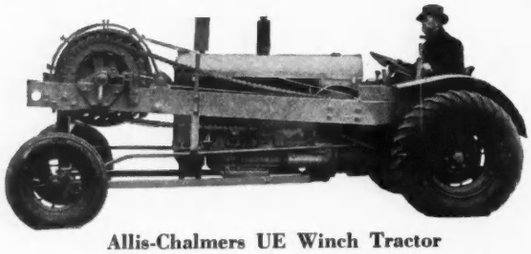
# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## Fred E. Cooper

Fred E. Cooper, Tulsa, Oklahoma, exhibits a complete line of Allis-Chalmers winch tractors in single and double drum models, skid winches in single and double drum models, gas and oil power units.

### ▪ *Winch Tractors*

Allis-Chalmers units shown by Fred E. Cooper are equipped with heavy duty tractor engines having removable cylinder sleeves, inserted valve seats and force feed lubrication. They are available with either 15 or 30 miles per hour road speed. They have eight line speeds, obtained through large, heavy duty tractor transmission, and are equipped with Cooper designed air cooled brakes.



**Allis-Chalmers UE Winch Tractor**

Featured in the Cooper exhibit is the Allis-Chalmers UE winch tractor, powered with a four-cylinder engine which has a five-inch bore and 6½-inch stroke. The maximum line pull is 58,000 pounds. Line speeds on this model range from 49 to 1133 feet per minute. It has 34-inch brakes, with 34 inches between flanges. Drum capacity is 9800 feet of half-inch line. The machine has four forward speeds and one reverse.

The A-C UM tractor shown is a general utility tractor. It is powered with a four-cylinder engine having a bore of 4⅜ inches and a stroke of five inches, capable of exerting a line pull of 29,115 pounds, with line speeds the same as those of model UE. Drum capacity is 8435 feet of half-inch line.

Cooper exhibits four other winch tractors. The Allis-Chalmers model W winch, which has a four-cylinder engine with a four-inch bore and stroke, a line pull of 18,020 pounds, line speeds from 54 to 628 feet per minute, and a drum capacity for 5700 feet of half-inch line, is one of these. Another is the A-C winch tractor equipped with a telescope mast having an expanded length of 40 feet and being removable. The mast can be furnished with any tractor power unit handled by Cooper, who claims that cleaning out equipment can be installed and removed in five minutes.

### ▪ *Skid Winches*

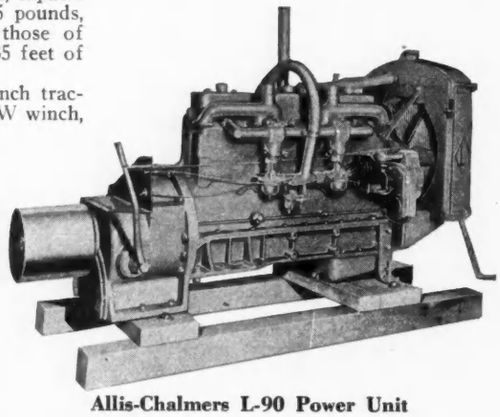
Combinations in double drum skid winches are included in the Cooper exhibit. One of these, which may be powered optionally with the UE or UM engines has three sizes of front drum capacities (for half-inch line): 20,700 feet, 14,000 feet and 10,500 feet; rear drum capacities, using half-inch line, are 8435 feet and 10,500 feet.

Another double drum winch tractor shown is for use with the UE or UM engines also. Using half-inch line and UE engine, the front drum capacity is 9800 feet, the rear drum capacity, 5350 feet. Equipped with the UM engine, the front drum capacity is 8435 feet and the rear drum capacity, 5350 feet.

The model UE skid winch, not traveling under its own power but mounted on frame and cradle to facilitate transportation, is equipped with an Allis-Chalmers heavy duty tractor motor and is designed for use on deep wells. Its four-cylinder engine, with a bore of five inches and a stroke of 6½ inches, exerts a line pull of 58,000 pounds, with line speed varying from 49 to 1133 feet per minute. It can be furnished with three sizes of drums, capacities of which, using half-inch line, are: 20,700 feet, 14,000 feet, and 10,500 feet.

### ▪ *Power Units*

Cooper shows a number of Allis-Chalmers power units, featuring the model L-90.



**Allis-Chalmers L-90 Power Unit**

**Allis-Chalmers UE Skid Winch**

In addition to removable cylinder sleeves, inserted valve seats, and force feed lubrication, these units have rifle drilled connecting rods. The L-90 engine and the E-60 engine on display can be equipped with Diesel fuel pumps and injectors, or operated as gasoline engines. Their compression is 125 pounds, and they fire from a spark furnished by a high tension magneto. Model L-90 has six cylinders, a 5¼-inch bore and a 6½-inch stroke and operates at from 600 to 1050 r.p.m. The E-60 power unit has four cylinders and may be had in a five or 5¼-inch stroke. It operates at the same speeds as the L-90 engine.

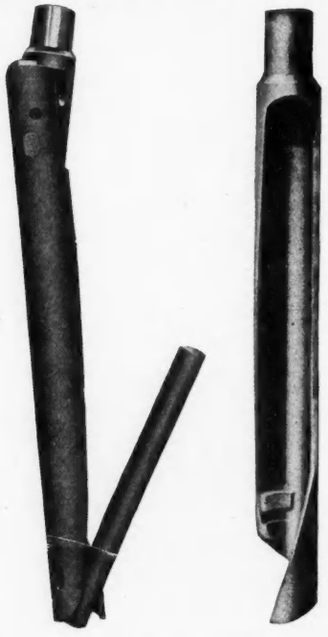
Another power unit shown by Cooper is the Allis-Chalmers M-40, a four-cylinder job with a bore of 4⅜ inches and a stroke of five inches. It is a little faster than the heavier models, running at from 600 to 1400 r.p.m.

A low priced well servicing unit exhibited at the Cooper booth is the A-C Rumley OX skid winch, designed to pull 3500 feet of two-inch tubing with ease. Maximum line pull is 16,960 pounds and drum capacity is 6560 feet of half-inch line. Four line speeds range from 79 to 513 feet per minute.

## Stone Oil Tool Company

### ▪ *Hydraulic Wall Hook*

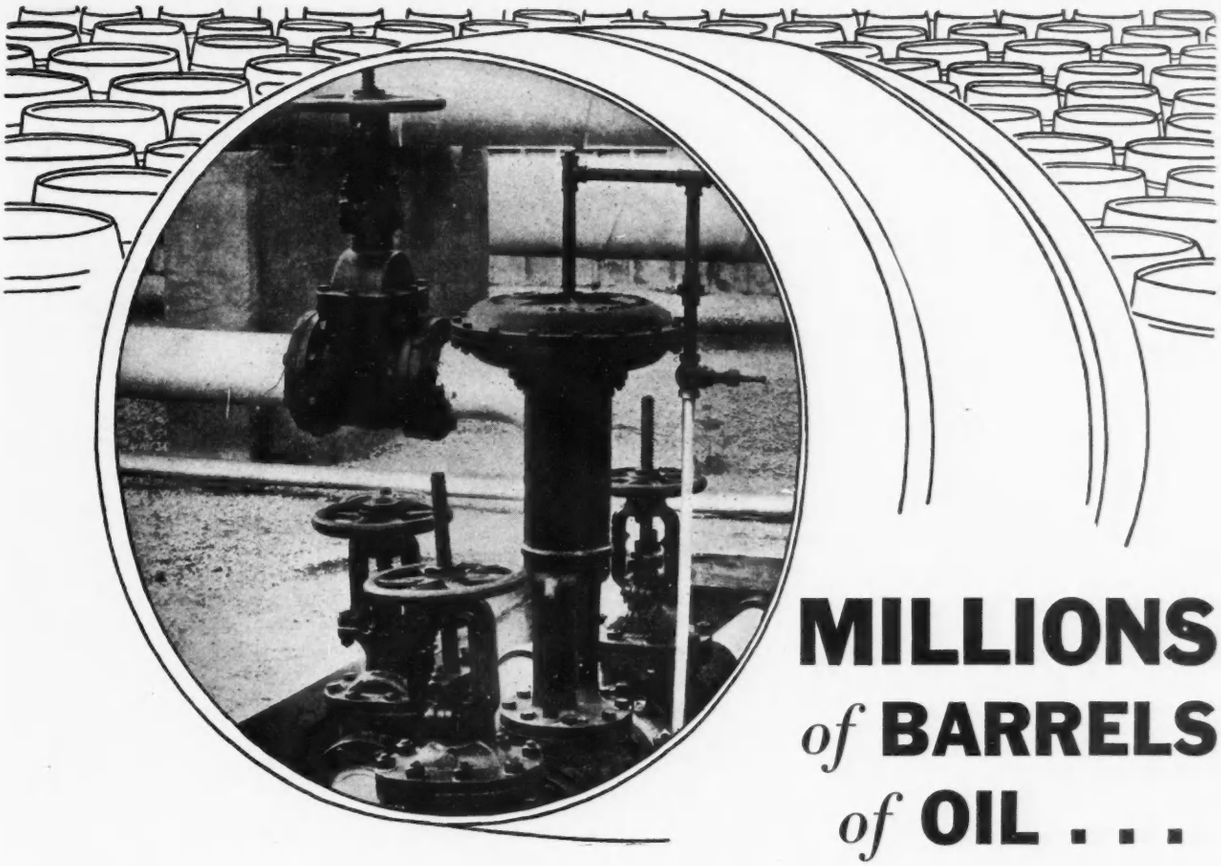
Stone Oil Tool Company is exhibiting the Sotco hydraulic wall hook that is operated by hydraulic pressure. It is so designed that a heavy wall hook arm extends outward several feet at an angle of approximately 14 degrees. The six-inch hook has a circular sweep of 15 feet. The tool is so constructed that plain pipe, tool joints or collars are engaged in the hole, making it possible for the operator to recover the fish in this manner.



**Left: Sotco Hydraulic Wall Hook**
**Right: Sotco Plain Wall Hook**

### ▪ *Sotco Plain Wall Hook*

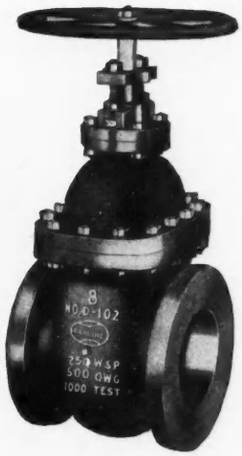
The Sotco plain wall hook has been designed to run in connection with the Sotco hydraulic knuckle joint, or dogleg. When run in connection with the knuckle it operates and performs in



# MILLIONS *of* BARRELS *of* OIL . . .

travel from field to refinery through pipe lines controlled by Darling Valves. Millions of cubic feet of gas are distributed to distant points in the same sure, satisfactory and economical manner.

The function of a gate valve is an important function. The selection of the gate valve which best meets the needs of the industry is an *important consideration!*




Today more and more oil operators . . . who believe in *saving the most by buying* the best . . . are using Darling Gate Valves for cross-country pipe lines, high pressure wells, and general field use.

Make *your* next gate valve installation a *Darling installation!*

**DARLING VALVE & MFG. CO.**

Williamsport, Pa.

NEW YORK OKLAHOMA CITY HOUSTON

*Mid-Continent Distributors:*
International Supply Co.
Moorlane Company

*California Distributors:*
Hickey Pipe & Supply Company
3375 East Slauson Ave.,
Los Angeles, Calif.

**DARLING**

**GATE VALVES**

the manner of the Sotco hydraulic wall hook. This tool is a positive releasing fishing tool, readily released or engaged at any time.

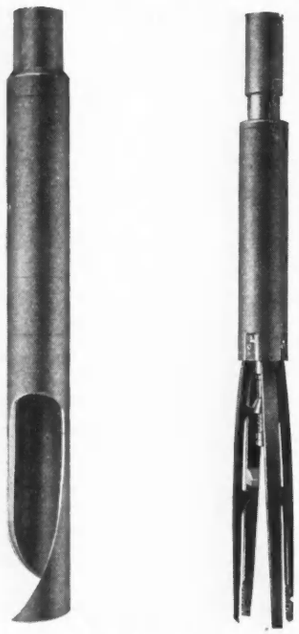
### ▪ *Sotco Hydraulic Knuckle Joint*

Stone Oil Company also is displaying the Sotco hydraulic knuckle joint, which is a massively built tool, operated by hydraulic pressure. It is for attachment to any type fishing tool, such as a cutting tool, socket, wall hook, etc. It permits carrying circulation around the corner of the hole. Circulation may be maintained at all times, regardless of whether the tool is in the closed or full open position and assures circulation on through the tool used below. Sotco knuckles are built to withstand great strain and stress.

**Sotco Hydraulic Knuckle Joint**

### ▪ *Sotco Combination Trip Packoff Overshot Slip Socket*

This tool for any size hole, and for all sizes of drill pipe has various features to take care of different conditions in the hole. It is equipped with a positive right hand release, a positive packoff that has withstood 4500 pounds pressure. The tool has a mill bottom for milling off ragged edges of the twistoff, a long spiral guide for straightening, a down jar for driving pipe down out of the tight place, enabling the operator to ream and thereby recover fish. It has a positive indicator to tell when the fish is engaged.



**Left: Slip Socket**
**Right: Sotco Adjustable Grab**

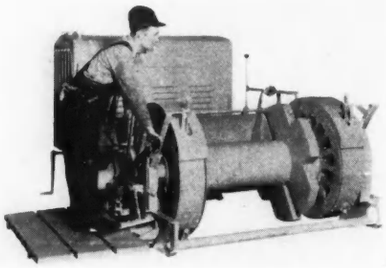
### ▪ *Sotco Adjustable Grab*

The Stone Oil Tool Company exhibit also includes the Sotco adjustable grab, which is a non-dimensional tool. For instance, the 16-inch grab has an arm spread of 27 inches and will run inside of 18-inch casing and recover a 17-inch bit. This tool is entirely mechanical, operating by weight and rotation. It has been recommended and successful in recovering bits, drill pipe slips, rotary bushings, sledge hammers, etc., from the bottom of the hole and from wall formation.

## Allsteel Products Manufacturing Company

### ▪ *Well Servicing Units*

Allsteel Products Manufacturing Company, Wichita, Kansas, is showing Model H and Model K single-drum rod and tubing hoists. Features of these machines are their portability, controls located within easy reach of the operator, fully equalized, wedge-action brakes providing more effective brake area than the conventional type, and trouble proof construction in which alloy steels, anti-friction bearings and heat treated parts to prevent wear are included.



**Allsteel Model K Drum**

**Allsteel Model H Drum**

### ▪ *Pipe Line Equipment*

A Model PC Live Sideboom Unit with wide gauge Model Thirty "Caterpillar" Tractor is also exhibited. All operations of the sideboom are controlled through friction clutch, and greater lifting capacity is secured due to all of the working mechanism being located on opposite side of tractor from the load to be lifted. Brakes on the drums are positive in action, so that it is unnecessary to have ratchet to hold either drum. It is possible to raise or lower the boom or the load while tractor is in motion. It is also possible to drop the load instantly in case tractor should start to overturn.

### ▪ *Draw Works*

Also on display at All Steel Products Manufacturing Company's booth is a Model RLDHW draw works with a friction driven cathead shaft mounted in self-aligning bearings, with a friction driven drum, driven from a clutch on the countershaft. The draw works is designed to fall within the eight-foot road limit. It features drop forged, or heat treated, wearing parts on brakes and controls, and anti-friction bearings throughout. The unit is recommended by the manufacturer for use on wells ranging in depth from 3000 to 5000 feet.

## Vernon Tool Co., Ltd.

### ▪ *Mud Screen*

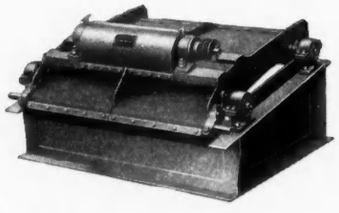
Vernon Tool Company, Limited, Los Angeles, California, is showing at the exposition the McNelly vibrating mud screen and a complete line of tool joints.

Features of the McNeely mud screen include a non-whipping screen cloth which is said to have extra-long life; curved screen surface which assures rapid removal of waste cuttings; an equally transmitted vibrating force to all parts of the screen, and an all-steel type of construction which saves ground space and head room, and makes installation and removal easy. This Vernon display is in operation.

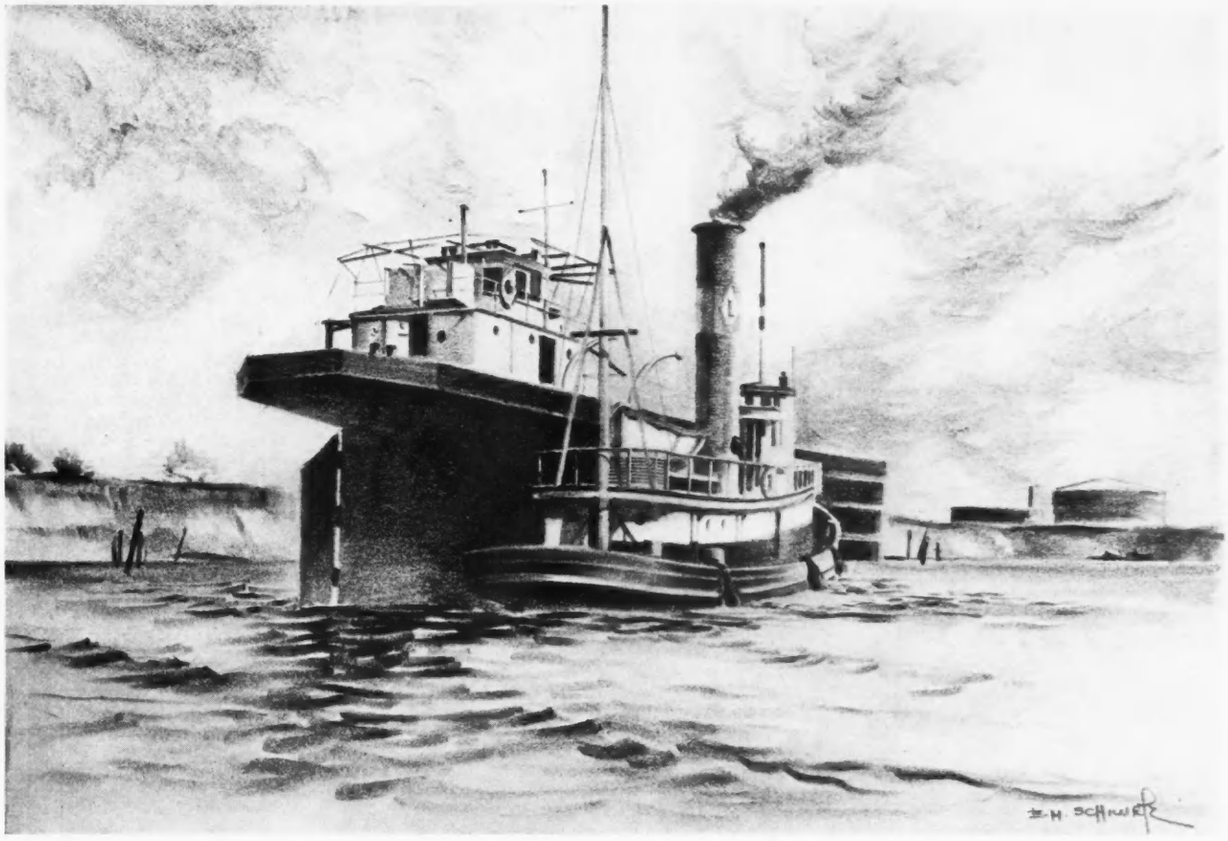
### ▪ *Tool Joints*

Vernon tool joints on display are said to emobdy such advantages as: true threads, cut after the joints are hardened; elimination of warping out-of-round, and highest-quality steel, heat-treated to very narrow limits.

**Vernon Tool Joints**



**McNeely Vibrating Mud Screen**



OIL FOR THE WORLD LEAVES A TEXAS PORT — *From a lithograph by E. M. Schiwetz*

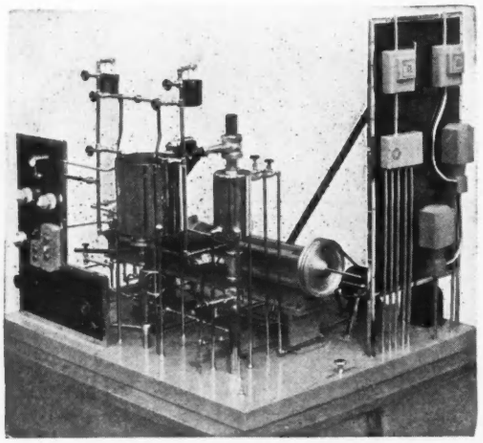
THE flourishing ports of Texas depend heavily upon the oil industry for their cargoes. At five of the State's major ports, oil is the principal commodity handled; and at Houston, oil capital of the State, over two and a half million tons of petroleum products were entered as export cargo during 1935, more than ten million tons were shipped to Atlantic ports, and over a million and a half tons to other Gulf ports. The FIRST NATIONAL BANK in Houston, located in the center of this major industrial activity of Texas, maintains complete facilities for the service of every department of the petroleum industry.

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## Baroid Sales Company

▪ ***Mud Tester***



**Baroid Mud Tester**

Baroid Sales Company, Los Angeles, Houston, and Tulsa, is showing at the Oil Equipment & Engineering Exposition a model of a filter press, or mud performance tester. This filter press is designed to duplicate, as nearly as possible, bottom hole conditions with regard to temperature and pressure and to determine results of the actions thereof on drilling muds.

The company is also exhibiting a model of a field service car. The cars carry both Stormer and funnel viscosimeters; a "Mudwate" hydrometer; screens for determining sand content; a centrifuge and Wulff pH outfit for determining the acidity or alkalinity of the mud; an electric hot plate and evaporation dish for determining the percentage of solids, and all other necessary equipment for the complete testing of mud at the well.

## E. D. Bullard Company

▪ ***Safety Equipment***

E. D. Bullard Company, 314 Merchants and Manufacturers Building, Houston, Texas, has on display a line of safety equipment featured by a cylindrical first aid kit.

The container of this kit is made of aluminum. When the metal clip at the base of the cylindrical container is released, out drops a canvas roll-up containing various first aid dressings and treatments in unit packets. Each unit packet is held in a clearly marked pocket sewn in the canvas roll-up.

▪ ***Reel Hose Mask***

The Bullard reel hose mask on exhibition combines the functions of the standard hose mask with a portable device which may be carried from place to place. The blower is removable from the case. The hose is simply wound on a light weight metal roll. The blower may thus be carried to any convenient point where there is an ample supply of fresh air and thus reduces the amount of hose necessary.

The "Universal" hose mask also is shown. It comes equipped with the standard Bullard one piece molded facepiece which fits the face snugly but without pressure. This makes it comfortable to wear and effective in use. It is furnished with a blower.

▪ ***Mouthpiece Mask***

This mask is recommended for use in light or moderate concentrations of acid gases, organic vapors or both. An elastic head band holds the mask in place. It is not necessary to grip and hold with the teeth. When out of use the head band holds the mask slipped around the neck for instant use. When the original canister is exhausted the used canister may be quickly removed and replaced with a new one.

▪ ***Non-Sparking Tools***

Bullard-Stanley non-sparking tools are on display, too. These tools are available in a wide variety of sizes and shapes and can be used wherever hazard may exist from sparks of a steel tool. They are made of beryllium copper, and have a high degree of hardness and tensile strength.

▪ ***Snake Bite Packet***

Another Bullard exhibit is the improved snake bite pocket packet. The entire outfit is contained in a pocket size metal case. The suction syringe for extraction of venom gives positive suction rather than depending on the suction of a compressed rubber bulb. There are no rubber parts in the snake bite outfit and hence no possibilities of deterioration under weather conditions so apt to be found where snakes exist.

▪ ***Sirens***

Bullard sirens on display are manufactured in both fractional horsepower and multi-horsepower types. Models are available for use on vehicles and for stationary use. The patented Bullard coding device which may be attached to any Bullard Siren makes it possible to use the siren as a signalling device.

▪ ***Derrick Slide***

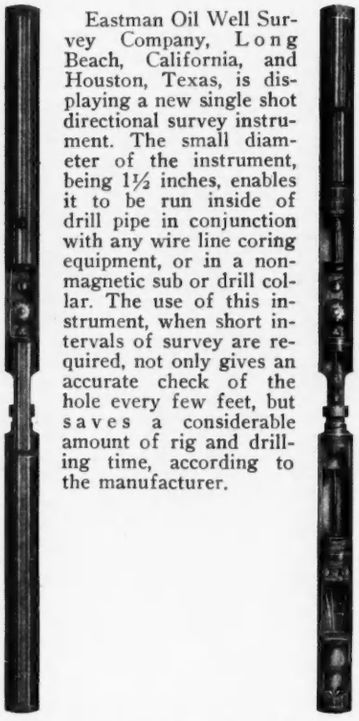
The safety slide shown at the booth is carried on to the tower and there placed on a guy wire. When quick escape is necessary the workman simply places one foot through the saddle, releases the brake and slides down the guy wire to safety. The complete slide weighs less than twelve pounds. A specially designed brake makes it possible to control the speed of descent without damaging the guy wire.

▪ ***Hard Boiled Hats***

"Hard Boiled Hats" on display are used for head protection in field operations and in refinery work. The hat is made of light weight, blow-resistant material. A patented hammock holds the crown of the hat away from the head and tends to absorb the blow on the hat instead of transmitting that blow to the head. Hard Boiled Hats are available in a number of different models to suit individual requirements.

## Eastman Oil Well Survey Company

▪ ***Directional Survey Instrument***

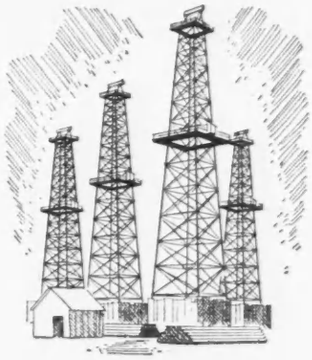


Eastman Oil Well Survey Company, Long Beach, California, and Houston, Texas, is displaying a new single shot directional survey instrument. The small diameter of the instrument, being 1½ inches, enables it to be run inside of drill pipe in conjunction with any wire line coring equipment, or in a non-magnetic sub or drill collar. The use of this instrument, when short intervals of survey are required, not only gives an accurate check of the hole every few feet, but saves a considerable amount of rig and drilling time, according to the manufacturer.

▪ ***Photographic Drift Indicator***

The innovation of the new Eastman Drift Indicator on display is the recording of the drift photographically. The instrument consists of a single small battery, a special Eastman stop watch, camera, light bulb, angle unit, and magazine of 60 photographic discs. The angle unit consists of a set of weighted cross hairs suspended in frictionless gimbals above a glass calibrated in etched concentric circles. In operation the watch is set for the time interval necessary for the instrument to arrive at the point of survey and come to rest. Upon reaching the time limit the watch makes an electrical contact between the battery and bulb, illuminating the etched glass and exposing a portion of the overlying cross-hairs to the photographic recording disc in the camera. If the recording were made while the instrument or drill pipe were in motion this fact would be instantly recognizable by the variable positions of the cross hairs on the photographic recording disc.

The instrument is made with a diameter of 1½-inch and is contained in a protective case of 1¾-inch diameter. It can be lowered into the hole either on a wire line or dropped through the pipe in a go-devil.



## THERE IS NOTHING SUPERIOR TO SEAMLESS

**If there is one thing more important than another in oil well tubing, it is the certainty of extra strength necessary to meet the hazards of drilling. The complete homogeneity of the wall structure of Pittsburgh Seamless is absolute assurance of extra strength beyond the normal requirements for ordinary conditions. Being forged from a single solid billet of steel, it has no seams, no points or zones of potential weakness. Its very freedom from these faults is assurance of protection against sudden failure and costly delays. Pittsburgh Seamless is the product of a pipe and tube manufacturing organization that for more than thirty years has devoted its research and development to Seamless exclusively. Pittsburgh Seamless Oil Well Tubing is available in standard A.P.I. sizes, externally upset to furnish maximum strength under the threads.**

**PITTSBURGH STEEL CO.**

**PITTSBURGH, PA.**

| | | |
|---|---|---|
| New York | Detroit | Chicago |
| St. Louis | Tulsa | Houston |
| Los Angeles | | San Francisco |

**Pittsburgh Seamless**

**CASING • DRILL PIPE • OIL WELL TUBING • LINE PIPE**

# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## Atlas Engineering Works

### ▪ *Tubing Head*

Atlas Engineering Works, Houston, features a Type B tubing head designed for use in South Texas fields. The head is manufactured for 2000 and 3000-pound test pressures and can be adapted to suspend any size tubing. Design of the head is very simple, particularly with reference to the pack-off arrangement which features an easily tightened packing gland.

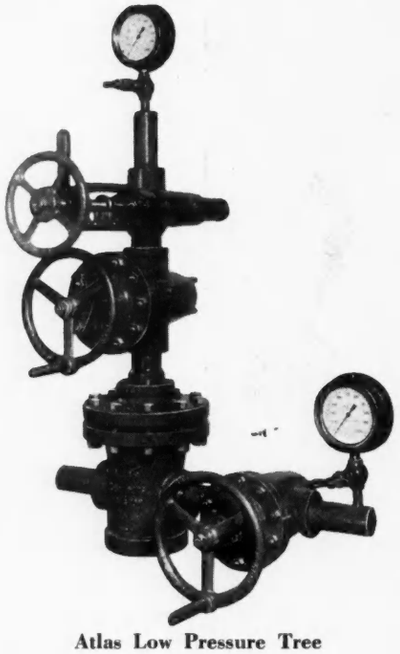
**Atlas Type B Tubing Head**

### ▪ *Swabbing Choke*

Another item displayed at the Atlas booth is what the exhibitor refers to as a "swabbing-through-choke," which is an adjustable choke with a port so situated as to allow free travel of the swab, eliminating the hazard of fouling the swab on the adjustable point. The needle does not have to be retracted from the seat while swabbing. This feature is obtained by having an offset cross, placing the needle out of the path of the swab.

### ▪ *Christmas Trees*

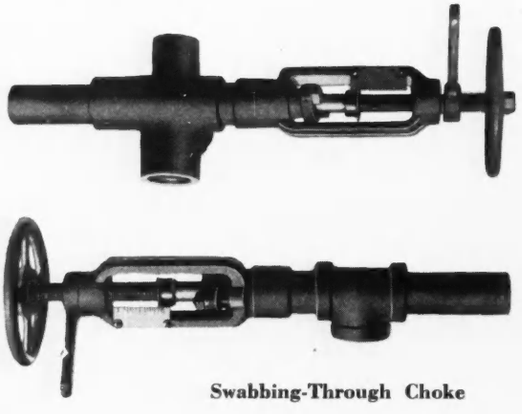
Also shown is a specialized line of Christmas trees, assembled to meet individual well and field requirements. These trees employ a combination of Atlas tubing heads, adjustable chokes and fittings with the idea of economizing on space and fittings. The trees are assembled for both high and low pressure wells.



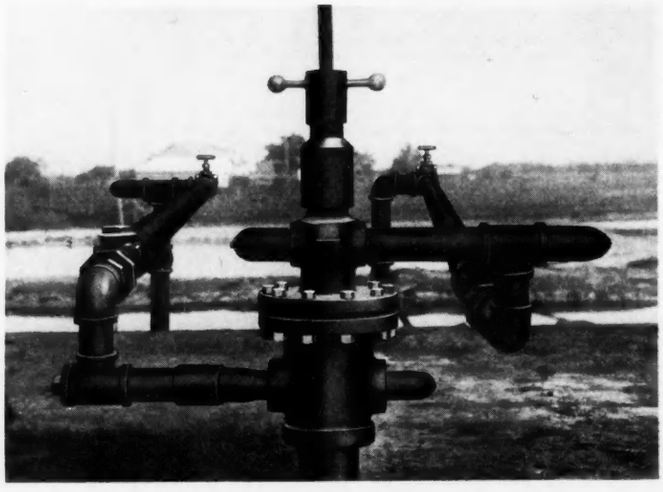
**Atlas Low Pressure Tree**

### ▪ *Pumping-Flowing Heads*

A combination pumping-flowing tubing head which works in conjunction with, or as a part of, the regular Atlas flowing tubing head for all pressures is displayed. The head is arranged so that it can be installed on a well without disturbing any flow lines or connections on the casing. Tubing is suspended from the flow head with double outlets for line connections. An extra long stuffing box is furnished for use with all types of polish rod packing, held in place by heavy brass glands.



**Swabbing-Through Choke**



**Flowing-Pumping Head**

## Mine Safety Appliances Company

Mine Safety Appliances Company, Pittsburgh, Pennsylvania, exhibits a group of safety appliances, including masks, gas and sulphide detectors, respirators, skull guards and first aid equipment.

### ▪ *Gas Mask*

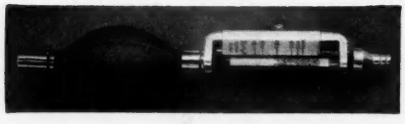
One of the items on display is the Burrell cannister type gas mask officially approved by the government for protection

**Burrell Gas Mask**

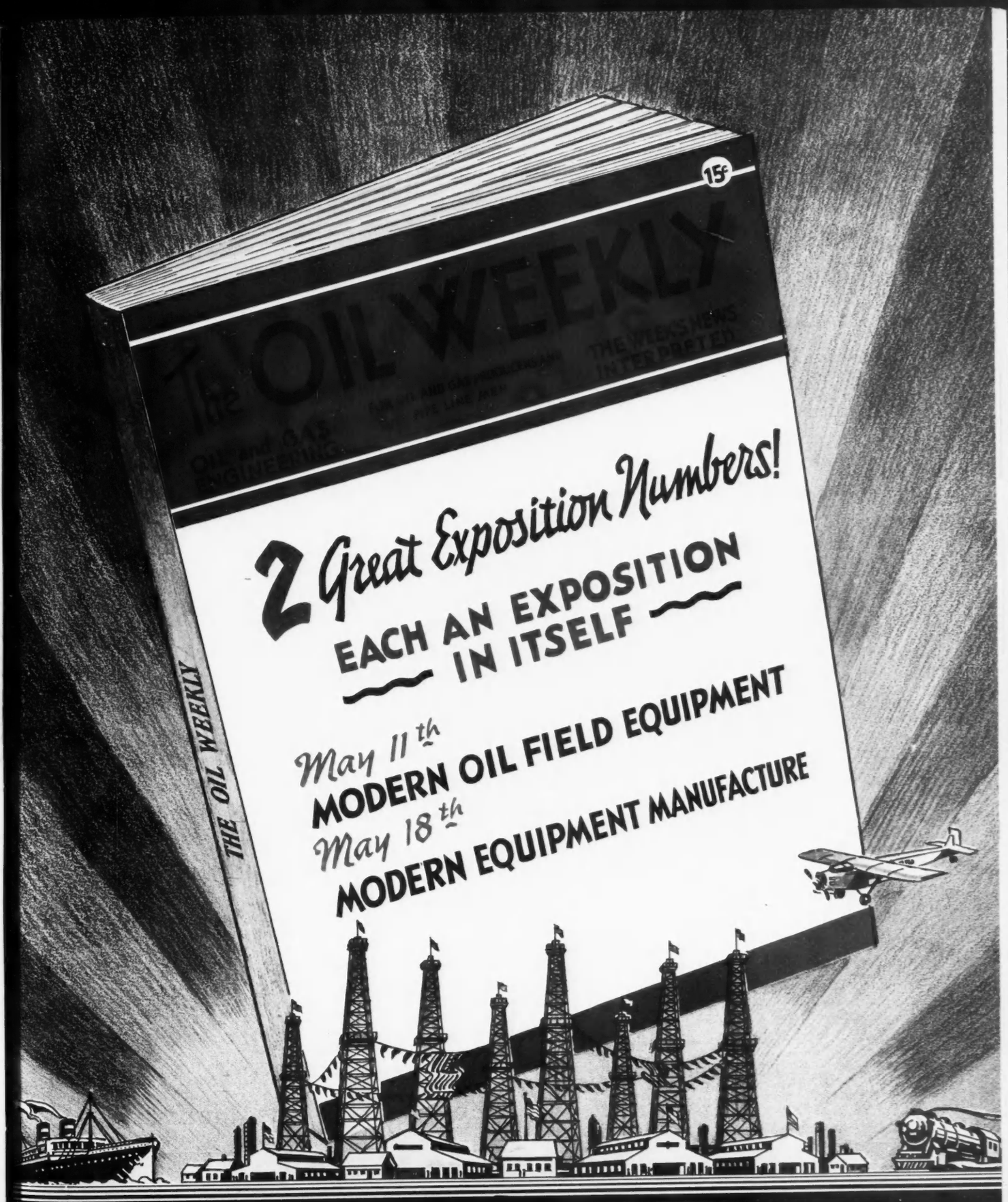
against poisonous industrial gases. It requires only that there be sufficient oxygen present to support life and is equipped with an automatic timer, and the Kops-type face piece.

### ▪ *Hydrogen Sulphide Detector*

The hydrogen sulphide detector provides a simple method of analyzing atmospheres. It is hand operated and, according to the Mine Safety Appliances



**MSA Hydrogen Sulphide Detector**




INTERNATIONAL PETROLEUM EXPOSITION and CONGRESS

TULSA, U.S.A. MAY 16-25, 1950

# A COMPLETE PANORAMA EQUIPMENT AND

## May 11, 1936 • *Modern Oil Field Equipment Number:*

THE MAY 11TH ISSUE of THE OIL WEEKLY will carry a full section giving an illustrated description of all modern field equipment to be displayed at the International Petroleum Exposition in Tulsa. THIS SECTION should prove a complete Exposition in itself of all new and important developments in the oil equipment industry and will serve as a handy reference work for the industry on these products throughout the year.

AN ADDED FEATURE of the May 11th issue is that it will be published and in the hands of the industry on Monday, May 11th, prior to the opening of the Exposition in Tulsa on Saturday, May 16th. This should serve to stimulate interest in the various exhibits at the Exposition and will make it possible for oil men to determine in advance those items of particular interest on which they will want to concentrate their attention.

EXTRA COPIES of the May 11th issue will be available for distribution at the Mid-Year meeting of the American Petroleum Institute, which convenes in Tulsa on Wednesday, Thursday and Friday, May 13-15.

ADVERTISING IN THIS ISSUE provides manufacturers an opportunity to tie in their sales message with their equipment display, call attention to particular equipment which oil men should by all means see at the exposition, and thereby not only increase the interest in the exhibit but spread the value of their exhibit over the year.

*For Advertising Space Reservations in These Exposition Numbers Address*

# THE OIL WEEKLY

**3301 Buffalo Drive • HOUSTON, TEXAS**

NEW YORK PITTSBURGH CHICAGO TULSA LOS ANGELES

2 GREAT EXPOSITION NUM

MAY 11TH — MAY 18TH »

# OF MODERN OIL FIELD MANUFACTURE

## May 18, 1936 • *Modern Oil Equipment Manufacture:*

THE MAY 18TH ISSUE of THE OIL WEEKLY will provide a pictorial exposition "Behind the Scenes" in oil equipment manufacturing plants, showing men, methods and material as combined to produce modern oil field equipment. The purpose of this issue is to take the oil man on a trip of inspection through the many manufacturing plants and to let him see what is back of the finished product or products.

THESE MANUFACTURERS' PICTORIAL SECTIONS are to be presented in editorial style and will be printed on high quality coated stock.

MANUFACTURERS ARE URGED to present in their space complete information as to the origin and development of their company; photographs of plant exteriors and interiors; photographs of officers and sales and manufacturing personnel and descriptions of manufacturing processes involved.

OIL MEN will find this exposition of "Modern Equipment Manufacturer" of vital importance in the selection of oil field equipment. Used in connection with the equipment descriptions in the May 11th issue of THE OIL WEEKLY, a complete panorama of modern oil field equipment and manufacture is provided.

MANUFACTURERS SHOULD MAKE PROVISION for sufficient space in this number to provide a complete picture and description of their manufacturing and sales facilities.

### Special Reprints for Oil Men at the Exposition

**That section of the May 11th issue of THE OIL WEEKLY devoted to descriptions of equipment displayed at the Exposition, and the manufacturers' pictorial section, "Behind the Scenes," published in the May 18th issue, will be combined and reprinted under a special cover on 70-lb. enamel paper stock for free distribution to oil men attending the Exposition. 5000 copies of this valuable souvenir reprint will be provided**

MBERS OF THE OIL WEEKLY

« Each an Exposition in Itself

Company, detects the amount of hydrogen sulphide in the air in amounts ranging from .0025 to .04 percent, giving a reading in less than a minute.

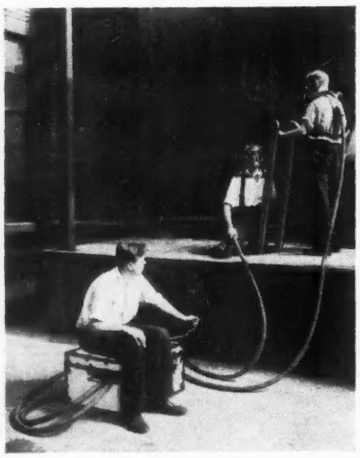
### ▪ *Combustible Gas Indicator*

Another item on display is a combustible gas indicator, a direct-reading, self-contained instrument that tests atmospheres for explosibility. It is compact, light in weight and easily operated. It is said to be suitable, with individual calibrations, for testing for practically all flammable gases and vapors, including hydrogen and acetylene.

**Combustible Gas Indicator**

### ▪ *Hose Masks*

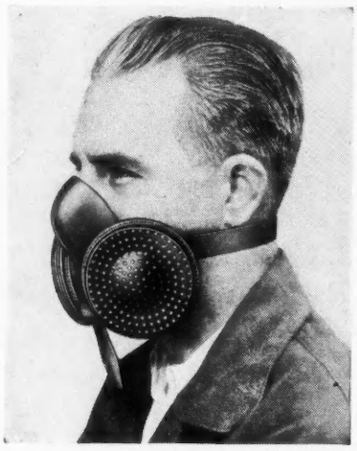
The MSA combination hose mask on exhibit is said to be officially approved by U. S. Bureau of Mines and American Gas Association, A large capacity hand-operated blower furnishes one or two users with cool, fresh air through as much as 150 feet of hose, permitting them to work in gaseous or oxygen deficient atmosphere.



**Hose Masks**

### ▪ *Respirators*

MSA exhibits two types of respirators: a dust and mist respirator for protection against pneumoconiosis producing dusts and chromic acid mists, and a lead dust respirator. Both are approved by the Bureau of Mines and combine protective



**MSA Comfo-Respirator**

efficiency with low breathing resistance. They are designed to eliminate interference with goggles, head protectors, and working freedom.

### ▪ *"Skullgards"*

Skull guards shown at the booth are described as being highly fracture resistant and durable, of material that will not

**MSA Skull Guard**

soften from contact with oil or perspiration, and that it is a non-conductor of electricity. In addition, they are light in weight and cool, and are made in eight sizes.

### ▪ *Oxygen Breathing Apparatus*

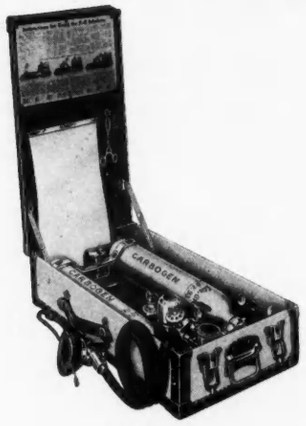
The oxygen breathing apparatus shown at the booth is available in two-hour and half-hour types. Each is a self-contained,

**Oxygen Breather**

compact, lung-controlled unit, complete with oxygen bottle and refillable generator containing substance to absorb the carbon dioxide given off by the wearer. The half-hour unit weighs 13¼ pounds and is carried on the wearer's chest and stomach. The larger unit is carried on the back.

### ▪ *Inhalator*

The inhalator shown is a resuscitation device often used for victims of gas asphyxia and electric shock. It is designed



**Inhalator**

to be used in connection with the Schaefer method of artificial respiration. It supplies the victim with a mixture of carbon dioxide and oxygen to ventilate and stimulate the lungs.

### ▪ *First Aid Equipment*

In addition to the above equipment, several sizes of first aid kits are shown at the booth. Fillings for these can be varied to suit individual requirements. The kits are packed in water and dust-proof cases for field use, and in cases not water-proof for inside use.

**MSA First Aid Kit**

## Cavins Bailer Service

### ▪ *Bailer*

Cavins Bailer Service, Houston, shows a combination bailer designed to function as a bailer, as a fishing tool, and as a perforation washer. The bailer is used, according to the company, for breaking sand bridges. By attaching a junk trap or basket to the bailer, it is claimed it will recover such fish as pins, cones, discs, cuttings and rubber. In using the bailer for cleaning out purposes, it is claimed sand will be drawn into the bailer from behind the pipe due to sudden opening of a specially designed valve.

# DEPEND UPON SHAFFER EQUIPMENT

## *Every day of the year!*

## *See the complete line of Shaffer Tools at the Houston Show*

**1. SHAFFER SPOOL TYPE LANDING HEADS**

The Shaffer Spool Type Landing Head provides the simplest, easiest and most compact means of landing and packing off strings of casing. No necessity of "letting go," measuring and rethreading to land casing. Each individual string is landed on its own slips and no accumulation of weight is put on these slips by subsequent strings. Type A Heads (illustrated) for pressures up to 3000 pounds per square inch and Type B for pressures up to 6000 pounds per square inch.

**2. SHAFFER ADJUSTABLE FLOW BEANS**

Patented Venturi Tubes make Shaffer Adjustable Flow Beans superior for controlling the flow of fluid and regulating the pressure and rate of flow to the closest degree possible. In successful use throughout the world on flow lines, wherever high pressures need controlling or wells are prorated. Made in many types to meet varying conditions. There is a Shaffer Adjustable Flow Bean for every need.

**3. SHAFFER TUBING HEADS**

A short and compact tubing head for extremely high pressures which provides a solid Christmas tree connection that can easily be removed without disturbing the tubing. Made in either screwed or flanged type.

**4. SHAFFER CELLAR CONTROL GATES**

Shaffer Cellar Control Gates provide the maximum of safety against blowouts when pipe is either in or out of the hole. They will positively close and hold under any condition encountered in modern drilling and will successfully hold high pressures indefinitely after being closed on the well.

**5. WARREN CONTROL HEADS**

The Warren Control Head provides means for packing off drill pipe, casing or tubing in the hole, and for making connections for a shut-off or to a production hook-up with the well under control.

**6. SHAFFER EXPANDING PIN TAPS**

The only tool of its kind. Made for left-handing or backing-off strings of drill pipe "stuck" in tight holes when a tool joint box or coupling is up.

**7. SHAFFER-HAMON ROTARY RELEASING SPEARS**

Recommended for removing casing or pipe, for setting liners, for holding jobs or left-handing jobs, and for use with any type of Rotary Jar. Made in two types. Shaffer-Hamon type (illustrated) for right hand work and T. & T. Type for left hand work.

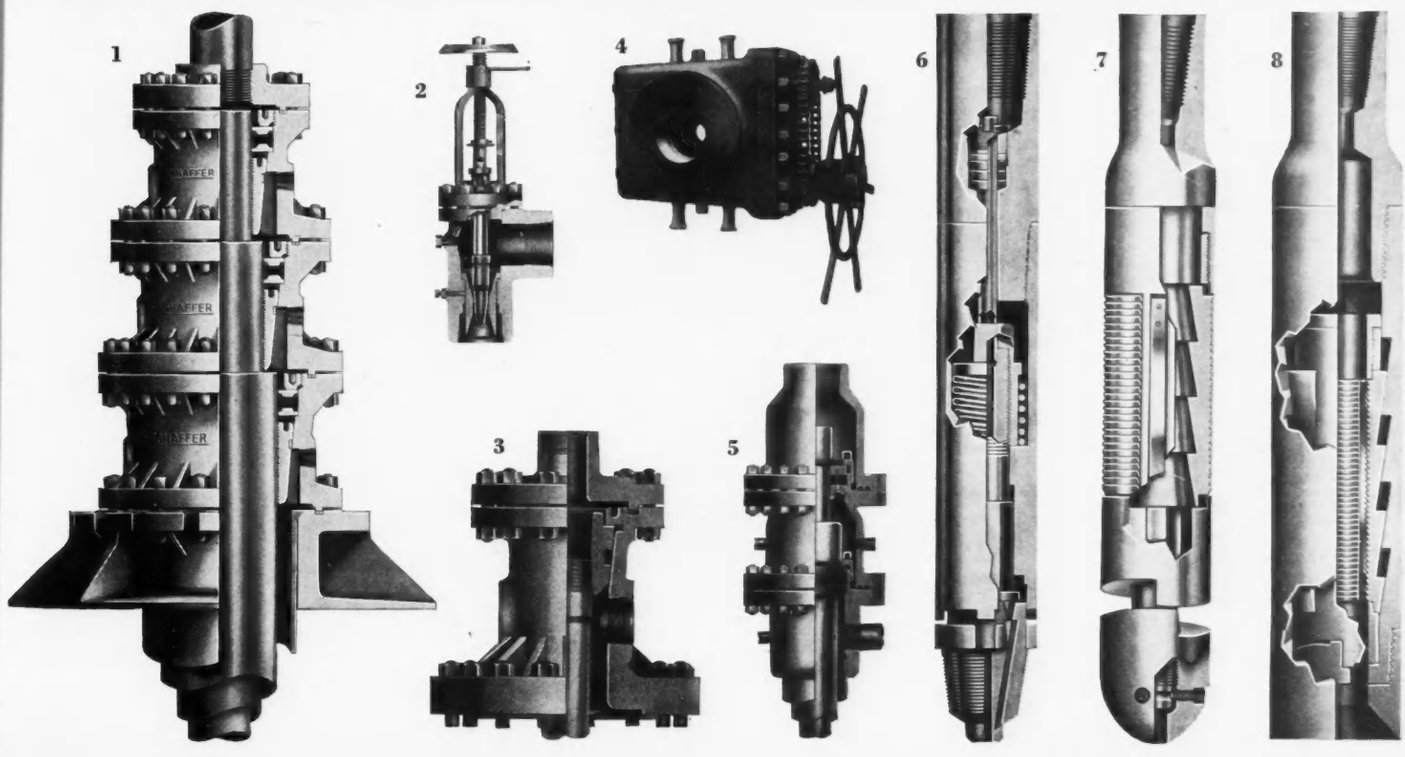
**8. SHAFFER-HAMON ROTARY RELEASING SOCKETS**

Recommended for recovering drill pipe, casing, liners, tubing or any type of fish for which a socket may be used. Made in two types. Shaffer-Hamon type (illustrated) for right hand work and T. & T. type for left hand work.

Write for new 1936 Shaffer catalog describing and illustrating Shaffer Equipment or see the Shaffer Section in the Composite Catalog. It begins on page 1143.

**SHAFFER TOOL WORKS**

BREA, CALIFORNIA — HOUSTON, TEXAS — Export . . . OIL WELL SUPPLY COMPANY



# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## Wico Electric Company

▪ ***Magnetos***

Wico Electric Company, Springfield, Massachusetts, has on display two recently developed types of magnetos.

Type AP magneto shown at the booth features a balanced electrical circuit, fixed coil and interrupter, rotating magnets and a rotating cam. It has a circulating lubricating system employing an oil filter and needle bearings. The type AP is designed for engines up to six cylinders with incoming spark of high intensity with impulse coupling and with eccentric adjustment of contact points.

The series A magneto shown at the Wico booth is similar in most respects to type AP, but is designed for use on engines of one, two and four cylinders. The series A utilizes die castings where practical.

## Crouse-Hinds Company

Crouse-Hinds, Syracuse, New York, exhibits at the Oil Equipment and Engineering Exposition at Houston a line of electrical appliances.

▪ ***Lighting Fixtures***

**Lighting Fixture Condulet**

The EV series of fixtures displayed are designed to keep any explosion taking place within the fixture from communicating with surrounding atmosphere. Pigtail leads are provided for connection to the circuit wires, and a threaded cover gives access to the wiring compartment for making and inspecting the connections. Openings are sealed or provided with threaded joints. This type of fixture is available for pendent mounting or for mounting close to the ceiling.

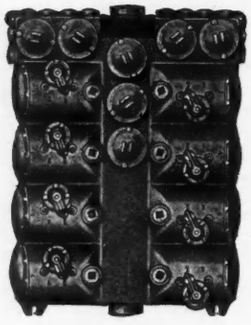
▪ ***Hand Lamps***

**Hand Lamps**

Type EVH explosion-proof and dust-tight hand lamp shown by Crouse-Hinds has a moulded rubber handle, which provides a comfortable grip for the hand. A third terminal is provided for connection to a third wire in the cord for grounding all non-current-carrying metal parts. The globe is mounted in a metal ring by a special process. In case of breakage of the globe the entire globe assembly has to be replaced.

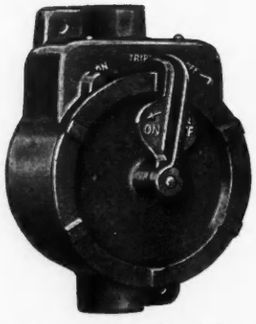
▪ ***Panel Board***

Also on display is an explosion- and dust-proof panel board consisting of a wired assembly of circuit breakers in an explosion-proof housing. A separate compartment is provided for each breaker. Wiring connections are made to main and branch circuit terminal blocks, mounted in separate T-shape compartments. Main terminals are furnished with main lugs only. Wire terminals are accessible through openings provided with threaded covers. Operating mechanisms for the breakers indicate "off" or "on" by the handle position.



**Panel Board**

▪ ***Condulets***



**Crouse-Hinds Condulet**

Type FLB condulets exhibited are suitable for service entrance, feeder, or branch circuit protection, for lighting, appliance, and motor circuits; but are not recommended as a substitute for motor running protective devices.

An external handle operates the circuit breaker within the housing. When the circuit breaker has been tripped, the handle takes a position between "off" and "on," marked "tripped."

Holes are provided for a padlock so that the operating handle can be locked "off" or "on." Locking the handle "on" does not prevent tripping, but the breaker cannot be reset without removing the padlock.

▪ ***Secondary Breaker Condulets***

Type FLDC explosion-proof and dust-tight condulets are made for certain types of secondary breakers with interchangeable thermal elements, which provide for accurate protection of motors.

**Type FLDC Condulet**

With one type breakers, the operating handle indicates by its position the position of the breaker handle as "on," "off," or "tripped." With another type of secondary breakers, the operating handle indicates "off" when the breaker is off, and "on" when the breaker is either on or tripped.

## Link-Belt Company

Link-Belt Company, Chicago, exhibits at the show a number of types of rotary chains, speed reducers, variable speed transmissions, flexible couplings, anti-friction pillow blocks, mud screens, and other equipment for the producing branch of the industry.

▪ ***Rotary Drilling Chains***

Link-Belt shows a number of sections of "Hyper" chains at its booth. These are displayed in three styles: SS-40 API-3, ultimate strength, 75,000 pounds; SS-124 two bar API-4, ultimate strength, 130,000 pounds; and SS-124 three bar API-4, ultimate strength, 170,000 pounds. The two and three bar "Hyper" chains shown have side bars of drop forged alloy steel, normalized and heat treated, with metal distributed to secure maximum strength with minimum weight.

**Three Bar "Hyper" Chain**

The "Red-Hed" rotary chains on display are available in two styles: SS-40 (API-3), ultimate strength 40,000

# DAYTON COG-BELT DRIVES ARE RUGGED DRIVES

The Dayton Cog-Belt is as tough as a hippo for brute strength jobs. No other belt has such ruggedness and endurance. No other belt can stand up and take punishment like the Dayton.

This is because of the patented, laminated construction of the Dayton Cog-Belt. Layers of cord cable fabric are welded into the heart of the belt. These cords are applied and "cured" under tension, eliminating stretch and minimizing adjustments during service.

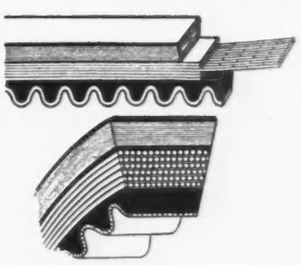
But that isn't all. They are "built-to-bend." The greater lengthwise flexibility of Dayton Cog-Belts, their extreme crosswise rigidity, their freedom from bulging and distortion—all contribute toward greater ruggedness and longer life.

The many advantages of Dayton Cog-Belts are graphically illustrated and clearly explained in our big new book, "The A B C's of V-Belts." A copy will be sent you upon request. Write today.

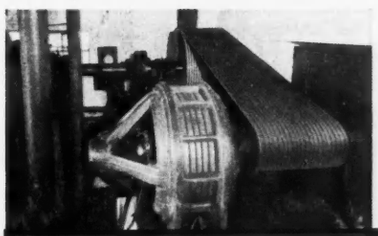
THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO

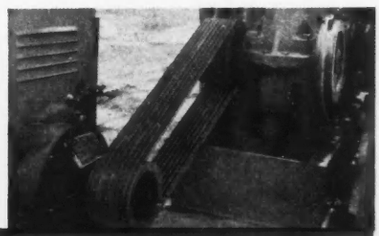
*World's Largest Manufacturers of V-Belts*
*Manufacturers also of Dayton Fan Belts, Dayton Red Tube Radiator Hose, Dayton Thorobred Tires and Dayco Printers' Rollers*

## HERE'S WHY



*Laminated Construction Gives Maximum Stamina and Greater Gripping Power*





COMPACT • DURABLE • EFFICIENT

**Dayton**

COG-BELT DRIVES

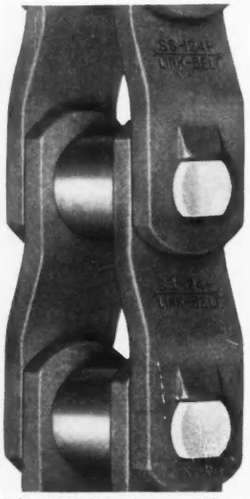
## THE A B C's OF V-BELTS

This is the greatest book on V-Belts ever published. It shows how Dayton Cog-Belts transmit more power, save space, last longer, and reduce costs. This important book will help you solve your drive problems. It's free. Write for a copy.

*COG-BELT DRIVES—F. H. P. V-BELT DRIVES—V-FLAT DRIVES—DAYCOIL OIL-PROOF V-BELTS—COMPLETE DRIVES, PULLEYS and BELTS IN STOCK*

pounds, and SS-124 (API-4), ultimate strength 112,000 pounds.

For drilling jobs where the earth's formation is not very hard and for jobs requiring shallow holes, Link-Belt displays additional rotary chains,



**"Red-Hed" Rotary Chain**

ranging in strength from 28,000 to 60,000 pounds.

### ▪ *High-Speed Chain*

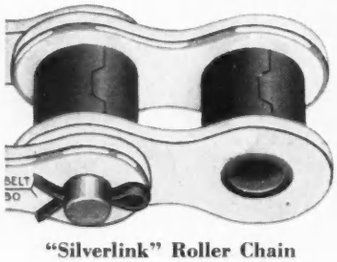
For the higher speed power drive, as from motor to first countershaft, there is shown at the booth the "Silverstreak" silent chain drive. The man-

**"Silverstreak" Chain Drive**

ufacturer claims flexibility, durability and low cost for the chain drive. It is made in sizes to take care of power requirements up to 1000 horsepower and over.

### ▪ *Roller Chain*

Link-Belt also shows a "Silverlink" finished steel roller chain for moderately high speed power transmission on both light and heavy oil field equipment, including motor trucks. It is shown in pitches of ⅜-inch to 2½ inches, in single and multiple widths.



**"Silverlink" Roller Chain**

### ▪ *Speed Reducers*

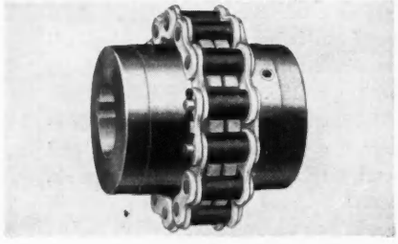
Another interesting part of this manufacturer's exhibit is that devoted to speed reducers. These are self-contained, automatically lubricated and equipped with anti-friction bearings. They are available in three types: motorized helical gear type, herringbone gear type (not motorized), and worm gear type (not motorized).

In the motorized reducer, the shaft extends through the reducer and, as the motor frame is secured to the side of the reducer housing, no motor base plate or motor shaft coupling is needed. The herringbone gear reducer is designed for making large speed reductions in limited space.

### ▪ *Variable Speed Transmissions*

Link-Belt Company's P.I.V. gear is shown in horizontal mounting motorized form. The unit is of all metal construction, with working parts automatically lubricated. The design has made provision to practically eliminate fluctuations and loss of power, as the power is transmitted from the input to the output shaft through a positive chain drive of special design.

### ▪ *Flexible Couplings*

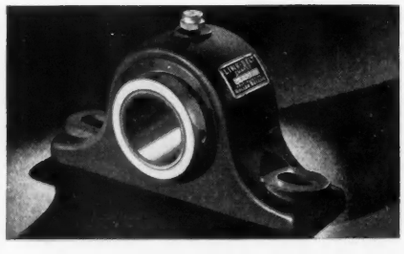


**Flexible Coupling**

Several types of flexible couplings for connecting shafts in line are shown at the booth. The coupling featured in this part of the exhibit consists merely of two cut tooth sprocket wheels connected with a piece of finished steel roller chain. It is furnished without an oil retaining casing.

### ▪ *Anti-Friction Pillow Blocks*

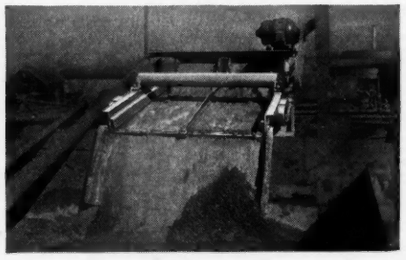
Anti-friction bearing units are shown also. These are displayed in many sizes and types of mountings. They are calculated to reduce power consumption and result in longer life of bearings.



**Anti-Friction Bearing**

### ▪ *Mud Screens*

Link-Belt shows a vibrating screen for cleaning rotary mud. The screen is of fine mesh to reject large and heavy cuttings as well as sand and shale. The manufacturers claim it will reduce the hazards of gas blowouts, make a smoother well, save drilling time by reducing the possibility of the drill pipe's sticking, lengthen the life of pump parts, swivels, rotary hose, standpipes, bits and reamers.



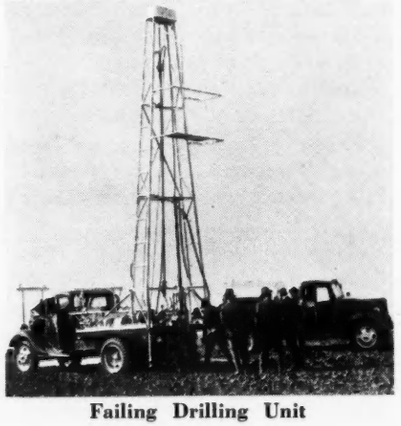
**Link Belt Mud Screen**

## George E. Failing Supply Company

### ▪ *Portable Drilling Unit*

George E. Failing Supply Company, Enid, Oklahoma, exhibits the Model 36 portable drilling unit, equipped with portable pit and sample recovering equipment.

Outstanding features of this drill are: New rugged power take-off built especially for this drill and capable of continuously handling the entire power

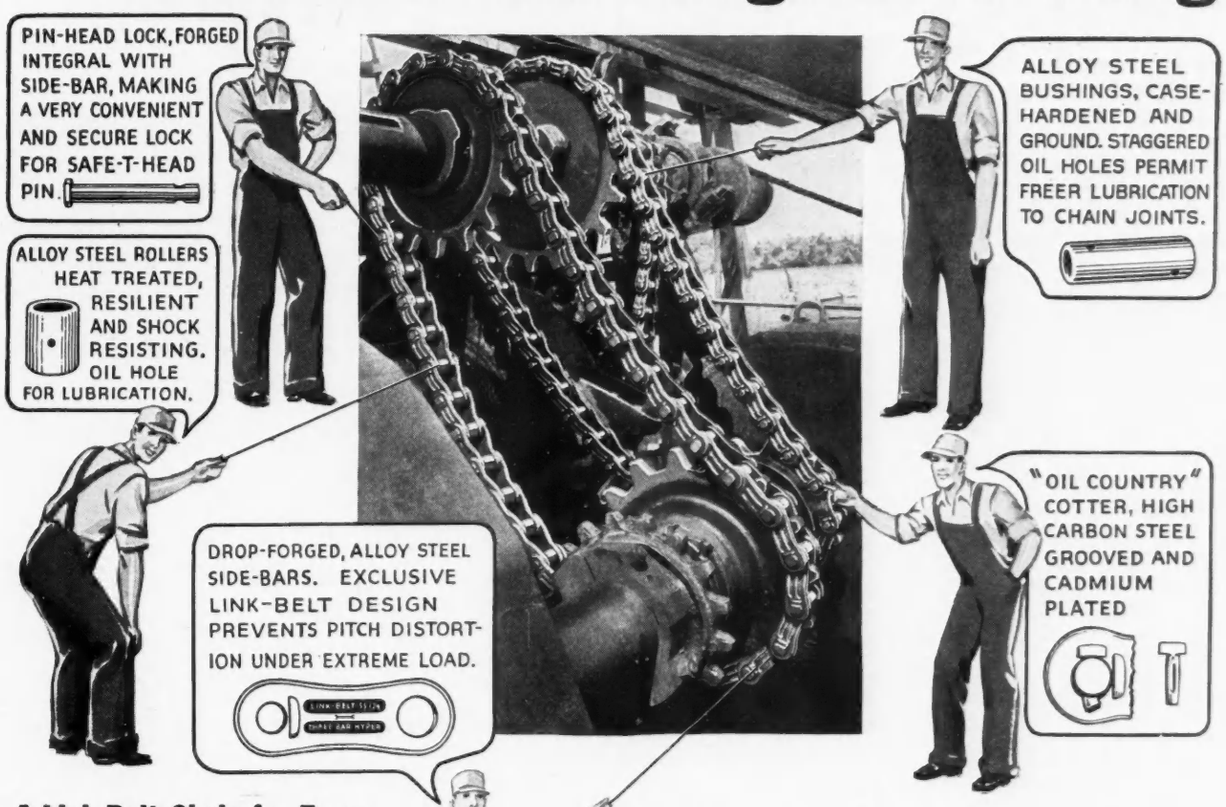


**Failing Drilling Unit**

output of the truck motor; anti-friction bearings throughout; closed patented oil system of superior design; 4x5-inch pump equipped with chrome-nickel steel liners; "Sizmo" pistons and full floating steel connecting rods; alloy seamless steel tubing mast; planetary geared drum.

This drill may be used as a conventional core drill for 1000-foot holes, or a kelly, which is carried in the folding mast, may be quickly installed for drilling soft formations. The booth also includes an exhibit of a new swamp buggy—developed by the Failing Supply Company.

# Here's Why
# HYPER Rotary Chain
## Welcomes the Toughest Drilling


PIN-HEAD LOCK, FORGED INTEGRAL WITH SIDE-BAR, MAKING A VERY CONVENIENT AND SECURE LOCK FOR SAFE-T-HEAD PIN.
ALLOY STEEL ROLLERS HEAT TREATED, RESILIENT AND SHOCK RESISTING. OIL HOLE FOR LUBRICATION.
ALLOY STEEL BUSHINGS, CASE-HARDENED AND GROUND. STAGGERED OIL HOLES PERMIT FREER LUBRICATION TO CHAIN JOINTS.
DROP-FORGED, ALLOY STEEL SIDE-BARS. EXCLUSIVE LINK-BELT DESIGN PREVENTS PITCH DISTORTION UNDER EXTREME LOAD.
"OIL COUNTRY" COTTER, HIGH CARBON STEEL GROOVED AND CADMIUM PLATED

### A Link-Belt Chain for Every Drilling Service

| Chain Number | Ultimate Strength, Pounds |
|---|---|
| SS-124, 3-Bar Hyper (API-4) | 170,000 |
| SS-124, 2-Bar Hyper (API-4) | 130,000 |
| SS-40 Hyper (API-3) | 75,000 |
| SS-40+ Red-Hed (API-3) | 48,000 |
| SS-124+ Red-Hed (API-4) | 112,000 |
| SS-40 (API-3) | 28,000 |
| SS-124 (API-4) | 60,000 |

**STOCKED IN ALL FIELDS**

● Link-Belt Hyper Chain has set a standard for strength and resistance to wear that is unequalled.

So tough are the alloy steels of which it is made, so perfect is the finish, so precise is the fit of every Hyper part, that the complete chain resists evenly, throughout its whole assembly, the strains of severe service. 3-bar SS-124 Hyper illustrated (API-4) has an ultimate strength of 170,000 pounds.

**LINK-BELT COMPANY** 5643

INDIANAPOLIS LOS ANGELES DALLAS PHILADELPHIA
Houston, Fred Wallace, 4317 Montrose Blvd., P. O. Box 1082
Oklahoma City, W. H. Abele, Box 305, Route 4
Export Sales Office: 2680 Woolworth Bldg., New York, U. S. A.
Sold By Most Supply Houses Cable Address "LINKBELT"

**SEE OUR EXHIBIT — OIL EQUIPMENT EXPOSITION — HOUSTON APRIL 20-25**

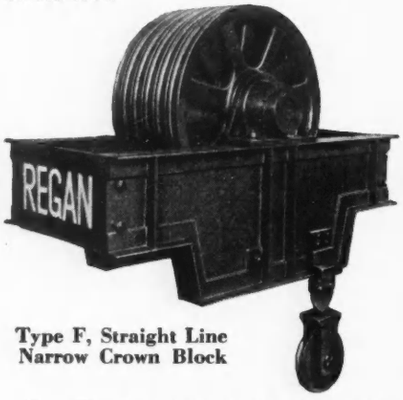
## Regan Forge & Engineering Company

Regan Forge & Engineering Company, San Pedro, California, has on display a number of crown blocks, travelling blocks, hooks, casing heads, tubing heads, tubing gas controller and snubbing equipment.

### ▪ *Crown Blocks*

Featured in the display are Types B, E, and F crown blocks. Type B crown block is a large sheave type, specially designed for rotary drilling. It is convertible from 4 to 6, or 10 to 12 lines, as desired. It has a detachable cat line sheave. Capacity of the Type B crown block is from 200 to 360 tons.

Regan's Type E crown block is single deck, welded construction and is equipped with Regan staggered bearings. It is equipped with five or six 48-inch or 60-inch sheaves and has a capacity of 360 to 500 tons.




**Type F, Straight Line Narrow Crown Block**

Type F crown block displayed by Regan Forge & Engineering Company is a straight line, narrow crown block with a capacity of from 360 to 500 tons. It is furnished with six or seven 48 or 60-inch sheaves and has single pin construction. Spacing between the outer groove centers is only 24 inches. Twelve lines may be strung within the space ordinarily required for 8 lines, according to the manufacturer.

### ▪ *76-Inch Travelling Block*

The 76-inch travelling blocks with five sheaves for 300-ton capacity and with four sheaves for 250-ton capacity. Each sheave has two bearings and rotates with its individual pin. All parts are designed to be interchangeable.

Shown with the travelling block are 8-inch and 9-inch alloy hooks. These are heavy duty type with numerous improved features, including specially developed bearing construction.

### ▪ *Tubing Gas Controller and Snubbing Equipment*

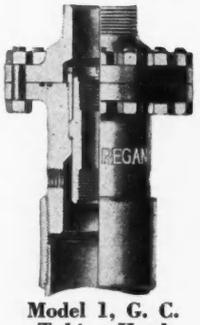
The Regan gas controller on display is used with the Miller method to permit casing to be run against pressure. The seal-off is automatically brought about by applying the well pressure behind the various rubber sleeves alternately when passing the couplings through. With a snubbing device, it is said to offer a self-contained unit, operated by the well pressure.

### ▪ *Casing Head Equipment*

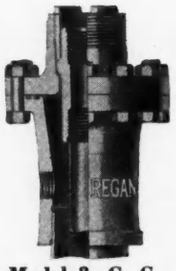
One control head shown by Regan is furnished in 3000 or 6000-pound type with flanges for plain hydraulic, tongue-and-groove, or steel ring packing. The manufacturer claims as many as 4 or 5 strings may be safely and securely landed in less than 32 and 40 inches, respectively.

### ▪ *Tubing Heads*

Whole and sectional models, actual size, of Regan's G.C. tubing heads constitute an interesting section of the display. These




**Model 1, G. C. Tubing Head**



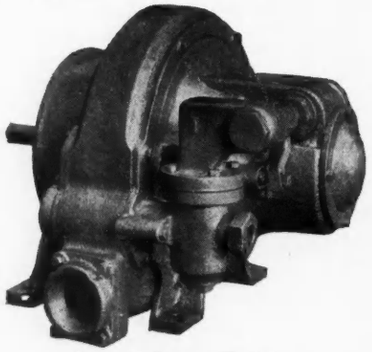

**Model 3, G. C. Tubing Head**

are furnished for jobs requiring 3000 or 6000 pound test equipment. These tubing heads are designed to permit partial or complete removal or insertion of tubing from or into well at any time, allowing for tubing of wells before or after completion.

## Garrott Brass & Machine Company

### ▪ *Steam Turbines*

Garrott Brass & Machine Company, Houston, exhibits a line of steam turbines embodying a number of improvements that have been made in the last 18 months. Working parts of these turbines are enclosed and run in oil. Ball bearings are oversize, and the governor ball bearing thrust operates in oil. A built-in speed trip prevents running away. The turbines are shown in two types: Type S of 2 to 5 horsepower and Type D of 7½ to 15 horsepower. They are made for 100 to 350 pounds superheated steam working pressure.



**Garrott Steam Turbine**

### ▪ *Turbo-Generator*

The turbo-generator displayed is for rig lighting and built for outdoor use. It features a bearing thrust running in oil and is equipped with a special over-speed trip built into the unit as a protection against burnt out generators and lights. It is available in a type for 4 kilowatts and another for 5 kilowatts. They are made for 100 to 350 pounds superheated steam working pressure.

### ▪ *Bug Blower*

Bug blowers shown at the Garrott booth are made for steam or electric drive and are equipped with a 66-inch, deep pitched blade. The blower is mounted on skids, is rigidly built, and is provided with an oil bath for bearings.

### ▪ *Cable Slide*

The safety slide shown is equipped with a long lever on top which is a brake to assure safe landing. A sling is provided for the passenger.

## Green Head Bit & Supply Company

### ▪ *Line Scale*

Green Head Bit & Supply Company, Oklahoma City, has on display at the show a new line scale that operates without fluid and with no temperature variation. The hand indicator is in plain sight and points to the number of thousandths of pounds on the hook at all times.

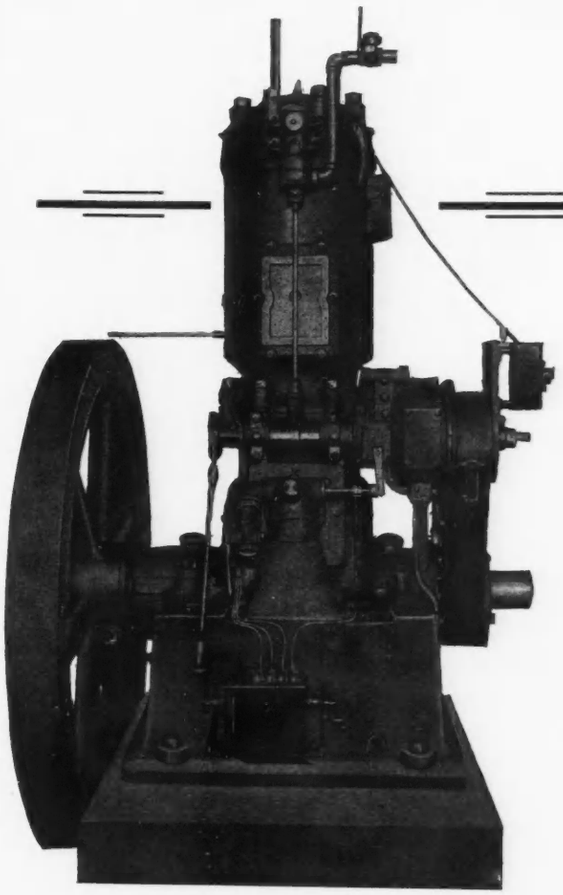
The spring on the line scale is made

**Green Head Line Scale**

of special alloy, heat treated steel, and with a load of 365,000 pounds on the hook it still has a reserve capacity of 35 percent, according to the manufacturers. The entire instrument is nickel plated and in reality the machine is more than an indicator, as the entire load is weighed. All that is necessary in changing to any number of lines is to place the middle clamp bolt in the hole in the angle arm so the weight of traveling block and hook register correctly on the dial. The weight of drill pipe, kelly, drill collars, hook and block will be indicated, plus the amount of pull if the pipe becomes stuck in the hole.

# The TIPS VERTICAL ENGINE

*A Texas Product—*



*—for Texas Conditions*

## TYPE GVO VERTICAL CONVERTIBLE DIESEL

**(On Display April 20-25—OIL SHOW in Houston)**

**A drilling engine which is quickly converted for pumping by simply changing the head and the substitution of a natural gas carburetor in the place of the inspection door on the crank case. It's as flexible as steam in drilling to 5,000 feet. It can cut fuel costs to as low as 1/5 the usual cost, operating on inexpensive fuel, and using only 35 to 40 gallons per 24-hour day. Does not heat water to point of evaporation. It develops its maximum horsepower at 327 r.p.m., thus minimizing wear. Built in 25 to 240 h.p. sizes . . . . 1 to 6 cylinders, and all parts are interchangeable. Ask for Bulletin J-4 and M-4.**

*Sales and Service*—Commerce St., Kilgore, Texas

# TIPS ENGINE WORKS

***"ENGINE BUILDERS***

TIPS ENGINE WORKS AUSTIN TEXAS

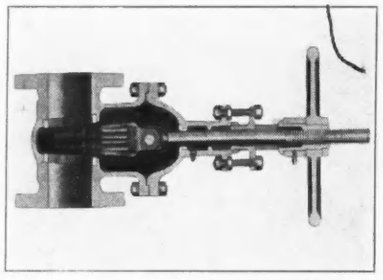
***SINCE 1899"***

# EQUIPMENT Featured at Oil Equipment & Engineering Exposition

## Darling Valve Company

▪ ***Valves***

Darling Valve and Manufacturing Company, Williamsport, Pennsylvania, is showing a line of cast steel taper seat gate valves of an improved design for high temperature and refinery service. One of these valves is equipped with a motor and an electric unit for remote control.



**Darling Cast Steel Gate Valve**

Also included in the display are forged steel double disc gate valves for drilling through and flow line service, semi-steel double disc gate valves and check valves for cross country pipe lines and gathering lines, and a quality line of all bronze gate valves. Several of the valves are cut away to show the internal construction and action of the parts as the valves are operated.

A fire hydrant for use in high pressure fire service lines at refineries and industrial plants is also shown.

There is an interesting display of valve cups and composition valve cups and balls and seats.

## Walter Ruska & Company, Inc.

▪ ***Scientific Instruments***

Walter Ruska & Company, Inc. of Houston, is exhibiting a line of instruments for geophysical, petroleum engineering, and other scientific work.

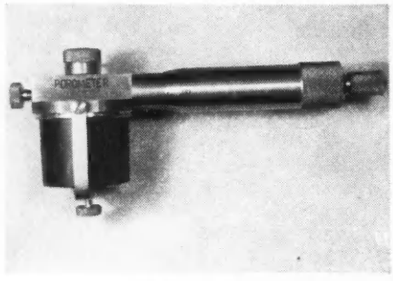
The illustration shows the new "Porometer," a small handy test instrument to determine the porosity of sand cores. It can easily be carried in the pocket.

The company also manufactures galvanometers, timing devices, recorders for seismograph work, clinometers and other equipment for torsion balance work, permeability testers, bottom hole samplers,

The company is displaying parts and special items made to customers' specifications. The concern is able to duplicate and furnish on short notice parts for almost any instrument.

The company is demonstrating at their exhibit the manufacturing of various small precision parts. A large number of replacement parts of finest workmanship for the most used geophysical and other instrument equipment will be shown.

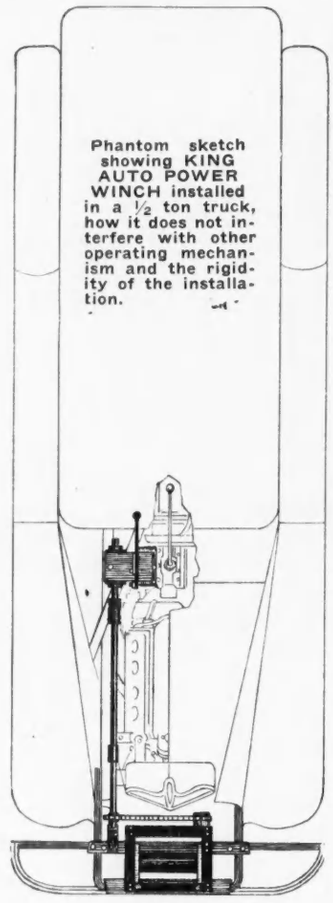
Walter Ruska & Company, Inc. are distributors of various electrical, optical, engineering, physical, and geophysical instruments.



**Porometer**

## Koenig Iron Works

▪ ***Auto Service Winch***



Phantom sketch showing KING AUTO POWER WINCH installed in a ½ ton truck, how it does not interfere with other operating mechanism and the rigidity of the installation.

Koenig Iron Works, Houston, gives a working demonstration of the "King" auto service winch on the lot in front of the Oil Equipment & Engineering Exposition.

The winch, designed for pulling a car or truck out of mud holes, sand beds, or ditches, or as an utility hoist for loading and unloading cargoes, or for pulling rods and tubing, can be mounted on the bumper, behind the cab, or on the side of the truck.

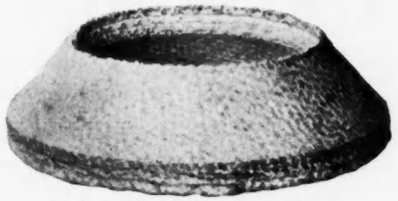
When the car or truck is stuck in the mud, the driver merely loosens a hook on the end of a catline and plays out enough line to reach a tree, or fence post. If neither of these is available, he uses an anchor stake. This done, he engages the winch and steps on the throttle or turns the crank, depending upon whether his truck is equipped with the power unit or the hand operated unit.

## The Texacone Company

▪ ***Packing Rings***

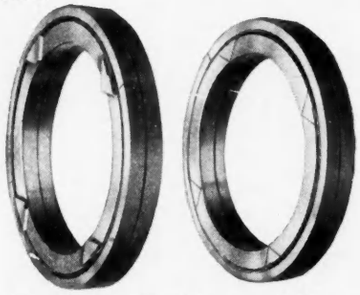
The Texacone Company, Dallas, Texas, exhibits a line of packing rings and packing.

A feature of the display is the "Accordion" packing ring, a folded lamination type of strength and flexibility, made in all sizes for liquids, gases and vapors. It may be applied in standard stuffing boxes and is also furnished in special Texacone cages and equipment which distribute friction by the control of pressure drop.



**"Accordion" Packing Ring**

Also shown at the Texacone booth are "King-Wheeler" metallic packing rings and cages, especially designed for fire checks on double-acting gas engines. It is claimed they afford a positive seal, with less friction and a minimum of carbonization.



**Metallic Packing Rings and Cages**

▪ ***Metallic Packing***

The third line featured by The Texacone Company is comprised of a type of metallic packing made particularly for compressor rods. A double orifice system by-passes the pressure instead of blowing the rings from the rod under rise of pressure, making it possible to control extreme pressure drop with fewer rings and less friction. A force feed lubrication system compensates for ring wear on top of rods.

**Metallic Packing**

Reproduction of the micrograph above shows the interlocking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent, they give Barrett Pipe Line Enamels unusual toughness and resistance to soil stresses.

*For pipe of large diameter, The Barrett Company will furnish equipment required to revolve pipe and spread enamel.*

Courtesy Lone Star Gas Company

**Barrett**

**PIPE LINE ENAMELS**

# The result of a lifetime of waterproofing experience

**To the problem of pipe line protection, The Barrett Company brought a lifetime of knowledge and experience in the use of coal-tar pitch for waterproofing tunnels, dams, subways and all types of underground structures. The result was the development of scientifically correct pipe line enamels that have since proved their effectiveness and efficiency in actual application. Wire or write for complete information.**

FIELD SERVICE

***Carefully trained Barrett field men will gladly work with you, combining their special knowledge and experience with your familiarity with conditions along the right of way.***

**THE BARRETT COMPANY, 40 RECTOR STREET, NEW YORK, N. Y.**

# COGLUBE

## FOR EXPOSED GEARS, CHAINS WIRE ROPES, ROCK BITS . . .

## FOR ANY TOUGH JOB!

Conoco COGLUBE is more than a gear shield. It is also a high quality lubricant. That's why it does a better job of lubricating open gears, rock bits, wire ropes and chains. A special process used in its manufacture makes it stick to working surfaces much more tightly than other gear shields or compounds. Washing action of water has no effect on it. COGLUBE'S tough lubricating film resists rupture from shock load and sliding action. It prevents galling under the most severe conditions. COGLUBE is made in six weights, from semi-fluid to extra heavy. COGLUBE will save you time and money. Order from our nearest sales warehouse. Write Dept. 18, Ponca City, Okla., for our new book on applying oil field lubricants.

CONOCO

**CONOCO OIL FIELD LUBRICANTS**

CONTINENTAL OIL COMPANY — Est. 1875

### CONTINENTAL OIL FIELD LUBRICANTS IN STOCK AT THESE POINTS:

**CALIFORNIA**
Los Angeles

**COLORADO**
Craig
Denver
Ft. Collins
Ft. Morgan
Pueblo

**KANSAS**
Arkansas City
Chanute
Eldorado
Herington
Hutchinson
Independence

**KENTUCKY**
Owensboro

**LOUISIANA**
Lake Charles

**MONTANA**
Billings
Cut Bank
Great Falls
Lewistown
Shelby
Winnett

**NEW MEXICO**
Artesia
Farmington
Gallup
Hobbs

**OKLAHOMA**
Ada
Altus
Ardmore
Bartlesville
Chickasha
Duncan
Edmond
Enid
Guthrie
Muskogee
Oklahoma City
Okmulgee
Ponca City
Seminole
Tulsa

**TEXAS**
Amarillo
Beaumont
Big Spring
Borger
Breckenridge
Brownwood
Corpus Christi
Corsicana
Dallas
Fort Worth
Galveston
Houston
Longview
Marshall
McCamey
Mexia
Midland
Mineral Wells
Pampa
San Antonio
Tyler
Wichita Falls

**WYOMING**
Casper
Glenrock
Greybull
Lovell
Lusk
Medicine Bow
Rawlins
Thermopolis
Worland

# *Gains Achieved*

## RETAIL POSTINGS ARE HIGHER AND TANK CAR MARKET STEADY

THE market situation registered some improvement during the past week, and continued firmness appears to be in prospect, as warmer weather and better demand for gasoline and kerosene promise to offset various unfavorable factors.

Improvement last week was largely in the form of advances in the retail prices of gasoline, and some strengthening of tank car prices at the levels of the past several weeks. These developments, in turn, naturally gave a firmer tone to the crude oil markets.

The outstanding retail price change of last week was the two cent advance of all grades of gasoline throughout the Pacific Coast region, put in effect by the major companies on April 14. That was the second increase within about two weeks, the two raises boosting prices 4 to 4½ cents a gallon. In Southern California new prices are 15, 17½ and 19½ cents for the three grades. It is hoped that independents will put and keep their prices within one cent of those of the majors. However, there is some doubt whether or not this advance can be held, coming so soon after the previous raise. California crude production is comparatively low, but it still is above the recommendation of the Bureau of Mines.

### Gains in Mid-Continent

In the Mid-Continent the market picture is fairly bright. Last week brought improvement in retail prices in various areas. In Chicago the higher octane gasolines were raised one half cent a gallon April 15. A more stable market within Texas was indicated last week, also, when independent stations in Houston increased third grade from 11 to 15 cents a gallon, including five cents taxes. Hot gasoline from East Texas is prevented by federal authorities from leaving the state, and when the volume assumes material proportions, the illegal material depresses the markets within Texas.

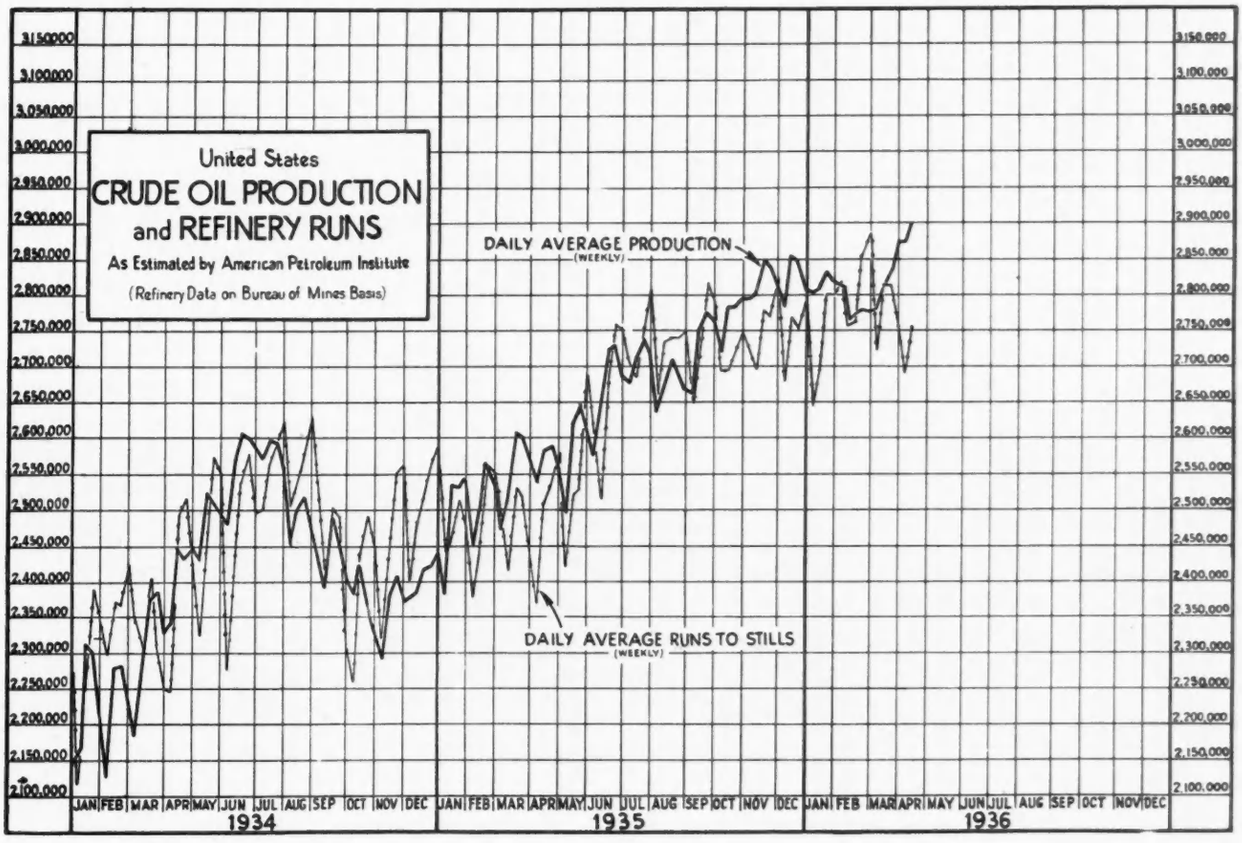
The hot oil has been at comparatively low levels most of this year and the Texas retail markets have been exceptionally stable until the past several weeks. Lower prices recently resulted apparently in part from adverse weather conditions as well as from the hot oil activities. Similarly, improvement last week possibly reflected the warmer weather.

### Tank Car Prices

Tank car prices of both gasoline and kerosene remained mostly unchanged last week in the Mid-Continent. But the milder weather was stimulating demand for both products.

Prevailing prices late last week on U. S. motor gasoline f.o.b. Oklahoma refineries appeared to be as follows: third grade, 62 octane and below, 5 to 5⅛ cents a gallon, and regular grade, 63 to 70 octane, 6 to 6⅛ cents. Those prices were in effect also in North Texas and West Texas. In East Texas fully tenderable third grade gasoline continued at 5 cents a gallon, although lower prices prevailed on material lacking federal tenders and limited to shipment within the state.

Rodessa has not become a great factor in the gasoline market. On the motor fuel made from crude in that field there has been some price shading, but that has been due primarily to the fact



Rodessa gasoline has low anti-knock value, some material from there being reported as having octane rating of 38 to 46. Price concessions have been necessary for moving this gasoline, the octane value being low in comparison with third grade gasolines from East Texas or some other areas.

### Kerosene Prices Same

Last week's kerosene prices in the Mid-Continent were the same as a week previously, although demand seemed to be somewhat better, with farming activities expanding. At Oklahoma refineries the 41-43 water white kerosene was priced f.o.b. plants at 4⅜ to 4½ cents a gallon, and the 42-44 water white grade was 4½ to 4⅝ cents. The supplies were indicated to be limited, and it was difficult to obtain immediate delivery. Inter-refinery buying was more in evidence than in the preceding week.

### Crude Markets Steady

The crude oil markets have continued steady, and gains in the markets for refined products are tending to give added strength. However, there is little talk now of any possible early increase in crude postings, such as was current some weeks ago. Clouding the picture are the particularly heavy inventories of gasoline, accumulated partially in consequence of the unusually severe and long winter. Also the difficulties and anxieties over controlling the Rodessa field are tending to hold down the hopes for higher crude postings.

### New Talco Posting

A development of the past week in the crude markets was the inauguration of a posting for the new Talco field, northeastern Texas, by Humble Oil & Refining Company. The company posted a flat price there of 60 cents a barrel. That is a comparatively low price in comparison with crude from some other fields. However, the oil is to be handled by tank cars. The Humble price is identical with that received by Pleasant Oil, Inc., in selling 10 cars on a spot deal with American Petroleum Company so that the latter could make a refinery test run. The Humble posting was effective April 15, and at present involves only the Humble company well in eastern Franklin County. The field so far has only two wells.

## East Texas Tank Car Shipments

**Week Ending April 12, 1936**

| PRODUCTS | No. Cars | Estimated Gallons |
|---|---|---|
| Gasoline | 436 | 3,548,994 |
| Fuel Oil | 218 | 2,115,443 |
| Casinghead Gasoline | 182 | 1,497,748 |
| Kerosene | 41 | 332,432 |
| Distillate | 34 | 274,251 |
| Gas Oil | 33 | 267,252 |
| Residuum | 6 | 48,861 |
| Total | 950 | 8,084,981 |
| Total Previous Week | 981 | 8,311,631 |
| Coastwise | 349 | ..... |
| Intrastate | 338 | ..... |
| Interstate | 263 | ..... |
| Total | 950 | ..... |

## DEFENDS OIL TAX

**Austin.** — Attorney General William McCraw has filed in the Supreme Court of the United States a brief defending the Texas Gross Production Tax Law. A suit brought by the M. M. Cook Estate questions the constitutionality of this act. The state courts have denied the Cook application, which lead to the suit filed in Federal Court.

## GASOLINE UP

### West Coast crude output still too high

RESTORING gasoline prices on the West Coast to the level which existed before this market became demoralized, Standard Oil Company of California, effective April 14, increased all three grades of gasoline two cents a gallon in California, Oregon, Washington, Arizona and Nevada. Other major companies met the increase, and the independent dealers are making an effort to boost their retail price to 15 cents, which is one cent under the major company third grade since the last increase. In the Southern California area, which is the greater Los Angeles district, third grade is retailing at 16 cents, while the regular grade sells for 17.5 cents. Ethyl is two cents higher.

This raise jumped gasoline prices 4 to 4.5 cents in less than three weeks, since Standard Oil Company took the lead on April 2 in boosting prices 2 cents for the higher grades and 2.5 cents for third grade. Price in San Francisco area is ½-cent higher than in Los Angeles, and it is understood the subsidiary companies of certain of the major companies will sell at the major company prices.

Some interests feel that the last raise was premature, and there is a fear that some of the independent refiners will not increase to within 1 cent of major company third, according to the general plan. If such independents fail to boost prices, there may be further trouble. It is feared two or three smaller companies willl not increase their retail price to more than 13 cents, which, after deducting the 4-cent tax, and allowing for dealer differentials, the net back will be close to 6 cents, against crude prices of slightly more than $1.00 for the more desirable grades.

Daily production of California crude oil still is showing an overage of between 30,000 and 40,000 barrels a day against an allowable of 538,800 barrels, and it is feared that should the present production continue, and should storage be increased, it might be necessary to reduce crude prices. Should March storage figures, due to become known about April 21, show no material increase, things may rock along into the summer, if another price war does not break out.

## Summary of Wells Completed in the United States Week Ending April 18, 1936

| | Completions | Oil Wells | Gas Wells | Failures | Initial Production | Total Completions 1935 | Total Completions this date 1935 |
|---|---|---|---|---|---|---|---|
| Alabama | .... | .... | .... | .... | ..... | 2 | 3 |
| Arkansas | .... | .... | .... | .... | ..... | 30 | 55 |
| California | 9 | 4 | .... | 5 | 665 | 274 | 219 |
| Colorado | .... | .... | .... | .... | ..... | 5 | 3 |
| Illinois | .... | .... | .... | .... | ..... | 4 | 8 |
| Indiana | 9 | 3 | 1 | 5 | 120 | 75 | 48 |
| Kansas | 32 | 28 | .... | 4 | 26,301 | 423 | 408 |
| Kentucky | 17 | 7 | 1 | 9 | 358 | 56 | 40 |
| Louisiana | 14 | 10 | 2 | 2 | 34,127 | 279 | 231 |
| Michigan | 13 | 7 | 6 | .... | 1,220 | 197 | 105 |
| Mississippi | .... | .... | .... | .... | ..... | 1 | 7 |
| Montana | 2 | 2 | .... | .... | 110 | 26 | 21 |
| New Mexico | 5 | 5 | .... | .... | 13,120 | 134 | 80 |
| New York | .... | .... | .... | .... | ..... | .... | .... |
| Ohio | 49 | 9 | 24 | 16 | 257 | 605 | 428 |
| Oklahoma | 68 | 47 | 3 | 18 | 34,103 | 772 | 648 |
| Pennsylvania | .... | .... | .... | .... | ..... | .... | 50 |
| Texas | 244 | 178 | 3 | 63 | 224,918 | 3,403 | 3,489 |
| Utah | .... | .... | .... | .... | ..... | .... | .... |
| West Virginia | 43 | 12 | 26 | 5 | 63 | 220 | 149 |
| Wyoming | .... | .... | .... | .... | ..... | 14 | 12 |
| Florida | 1 | .... | .... | 1 | ..... | 1 | .... |
| Total this week | 506 | 312 | 66 | 128 | 335,362 | 6,514 | 5,985 |
| Total last week | 444 | 306 | 45 | 93 | 475,458 | .... | .... |
| Total this year | 6,514 | 4,297 | 687 | 1,530 | 6,331,141 | .... | .... |

### Comparison of Permits Granted for New Wells

| STATE | Week Ending April 18 | Total this Mo. | Total this Year | Total this Date Last Year | 1935 Year Total |
|---|---|---|---|---|---|
| Arkansas | 3 | 6 | 25 | 50 | 70 |
| California | 17 | 65 | 258 | 258 | 925 |
| Louisiana | 35 | 80 | 355 | 252 | 846 |
| Kansas | 39 | 124 | 520 | 437 | 1,204 |
| Michigan | 13 | 43 | 186 | 131 | 749 |
| Oklahoma | 89 | 241 | 841 | 702 | 2,311 |
| Texas | 374 | 913 | 3,941 | 3,953 | 10,800 |
| Total | 570 | 1,472 | 6,131 | 5,783 | 16,964 |

## PRODUCTION HIGHER

### Three of leading states show larger crude yield

UNITED STATES crude oil production last week averaged 2,919,575 barrels daily. That was 23,835 barrels a day more than in the previous week and 122,275 barrels per day more than the recommendation of the Bureau of Mines. These figures are based on the regular estimates compiled by THE OIL WEEKLY, covering the week ended April 18.

The higher production last week as compared with the week before was the net result of increases for Texas, California, and Oklahoma and decreases for Louisiana and Kansas, while other states had minor fluctuations that about offset each other.

Oklahoma production was up approximately 20,000 barrels a day above the previous week's level, having averaged 569,700 barrels daily. The state was about 45,000 barrels per day above the Bureau of Mines estimate of demand. However, it is customary in Oklahoma for production to exceed the allowable early in each month and for the output to be cut back later in the month in compensation.

Texas showed an increase of 12,000 barrels daily in averaging last week 1,138,300 barrels daily. The state was assigned a quota of 1,122,800 barrels daily for April by the Bureau of Mines.

California production was up 2500 barrels above the previous week's level in averaging 575,500 barrels per day. On the Bureau of Mines schedule, California was allocated 552,600 barrels per day during April.

Louisiana production last week was down to 200,725 barrels a day from 205,050 barrels daily the week before, with Rodessa accounting largely for the decrease. Louisiana's federal allocation for April is only 160,900 barrels daily.

Kansas declined to 147,750 barrels daily from 148,550 barrels per day. The state was virtually within the Bureau of Mines allocation of 146,000 barrels daily.

## TEXAS YIELD UP

**Austin.**—Reports from the Railroad Commission Bureau of Oil Accounting show that the indicated production of crude oil in Texas for the month of February was 31,377,217 barrels, an average of 1,081,938 barrels per day. The allowable for the same period was 32,016,993 barrels, an average of 1,104,038 barrels per day.

Reports from this bureau are taken from the data filed by producers, and include data from nearly every producing lease in the state.

The January production was 45,105 barrels below the daily average for February.

The commission reported 60,335 producing wells, which include 23,655 flowing and 36,680 pumping wells. This was an increase of 286 wells over the preceding month. Operators reported 2,083,759 producing acres in February, which was 5221 acres less than the amount reported in January.

During the course of the month lease

## United States Crude Oil Production

**Estimates Compiled by THE OIL WEEKLY**

| DISTRICT OR STATE | BARRELS DAILY FOR WEEK ENDING April 18 | April 11 |
|---|---|---|
| TEXAS— | | |
| Texas Panhandle | 60,800 | 62,200 |
| North Texas | 58,800 | 58,100 |
| West Central Texas | 25,200 | 25,100 |
| West Texas | 178,900 | 177,300 |
| East Central Texas | 49,100 | 48,500 |
| *East Texas Field | 446,400 | 445,100 |
| †South Texas | 75,700 | 74,600 |
| †Texas Gulf Coast | 243,400 | 235,800 |
| *Total Texas | 1,138,300 | 1,126,700 |
| OKLAHOMA— | | |
| Oklahoma City | 162,600 | 153,800 |
| Seminole Area | 144,050 | 138,740 |
| Tatums | 3,500 | 3,500 |
| Lucien | 12,670 | 12,750 |
| Fitts | 52,600 | 46,350 |
| Edmond | 12,925 | 13,375 |
| Others | 181,355 | 181,200 |
| Total Oklahoma | 569,700 | 549,715 |
| KANSAS— | | |
| Ritz-Canton | 6,725 | 6,825 |
| Voshell | 3,325 | 3,300 |
| Nikkel-Hollow | 4,625 | 4,500 |
| Sedgwick | 5,700 | 5,625 |
| Burrton-Haury | 13,600 | 14,050 |
| Lorraine | 7,800 | 7,750 |
| Oxford | 7,825 | 8,000 |
| Others | 98,150 | 98,500 |
| Total Kansas | 147,750 | 148,550 |
| LOUISIANA— | | |
| North Louisiana | 59,925 | 64,850 |
| Louisiana Gulf Coast | 140,800 | 140,200 |
| Total Louisiana | 200,725 | 205,050 |
| ARKANSAS | 30,100 | 30,125 |
| CALIFORNIA— | | |
| Long Beach | 67,500 | 70,000 |
| Santa Fe Springs | 43,500 | 42,500 |
| Huntington Beach | 36,200 | 37,000 |
| Dominguez | 26,500 | 25,500 |
| Inglewood | 10,800 | 11,500 |
| Ventura Avenue | 36,000 | 34,000 |
| Seal Beach | 8,000 | 7,500 |
| Midway-Sunset | 50,000 | 50,000 |
| Elwood | 12,500 | 12,500 |
| Kettleman Hills | 80,500 | 77,500 |
| Mountain View | 25,500 | 26,500 |
| Playa del Rey | 14,000 | 13,500 |
| Others | 164,500 | 165,000 |
| Total California | 575,500 | 573,000 |
| MOUNTAIN STATES— | | |
| Wyoming | 34,100 | 35,500 |
| Montana | 13,500 | 12,900 |
| Colorado | 5,600 | 4,900 |
| Total Rocky Mountain States | 53,200 | 53,300 |
| NEW MEXICO | 63,800 | 63,600 |
| EASTERN STATES | 105,200 | 106,600 |
| MICHIGAN | 35,300 | 39,100 |
| *Total United States | 2,919,575 | 2,895,740 |
| *Surreptitiously produced oil in East Texas, not included in above figures, estimated at | 15,000 | 15,000 |
| Grand Total, including surreptitious production | 2,934,575 | 2,910,740 |

† Coastal Section of South Texas is included with Texas Gulf Coast.

## Crude Runs to Stills; Stocks of Finished and Unfinished Gasoline and Gas and Fuel Oil, and Cracked Gasoline Production, Week Ended April 11, 1936

**(Figures in thousands of barrels of 42 gallons as reported to American Petroleum Institute)**

| DISTRICT | Daily Refining Capacity | | | Crude Runs to Stills | | Stocks of Finished and Unfinished Gasoline | | | | Stocks of Gas and Fuel Oil | | | Daily Charging Capacity of Cracking Units | | | Cracked Gasoline Production |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Reporting | | | | Finished | | | | | | | | Reporting | | |
| | Potential Rate | Total | % | Daily Average | % Operated | At Refineries | Terms. Trans. Pipe Lines | Unfinished in Naphtha Distillates | Total Finished and Unfinished | Gas Oil & Distillate | Residual Fuel Oil | Total | Potential Rate | Total | % | Daily Average |
| East Coast | 612 | 612 | 100.0 | 426 | 69.6 | 7,531 | 11,357 | 1,154 | 20,042 | 2,858 | 3,580 | 6,438 | 534 | 534 | 100.0 | 93 |
| Appalachian | 154 | 146 | 94.8 | 102 | 69.9 | 1,588 | 970 | 296 | 2,854 | 353 | 164 | 517 | 79 | 78 | 98.7 | 20 |
| Ind., Ill., Ky. | 442 | 424 | 95.9 | 390 | 92.0 | 7,983 | 2,662 | 1,052 | 11,697 | 1,193 | 1,657 | 2,850 | 349 | 348 | 99.7 | 112 |
| Okla., Kans., Mo. | 453 | 384 | 84.8 | 265 | 69.0 | 4,850 | 2,091 | 764 | 7,705 | 667 | 1,765 | 2,432 | 256 | 228 | 89.1 | 64 |
| *Inland Texas | 330 | 160 | 48.5 | 108 | 67.5 | 1,437 | 78 | 218 | 1,733 | 198 | 1,295 | 1,493 | 148 | 105 | 70.9 | 26 |
| Texas Gulf | 680 | 658 | 96.8 | 587 | 89.2 | 6,214 | 270 | 2,119 | 8,603 | 2,707 | 4,037 | 6,744 | 399 | 393 | 78.5 | 145 |
| Louisiana Gulf | 169 | 163 | 96.4 | 124 | 76.1 | 1,229 | 384 | 291 | 1,904 | 874 | 1,206 | 2,080 | 77 | 74 | 96.1 | 21 |
| North La.,—Ark. | 80 | 72 | 90.0 | 35 | 48.6 | 245 | 50 | 96 | 391 | 24 | 270 | 294 | 46 | 44 | 95.7 | 9 |
| Rocky Mountain | 97 | 60 | 61.9 | 47 | 78.3 | 1,578 | ..... | 101 | 1,679 | 169 | 559 | 728 | 46 | 39 | 84.8 | 13 |
| California | 852 | 789 | 92.6 | 478 | 60.6 | 9,674 | 2,174 | 1,072 | 12,920 | ..... | ..... | 71,025 | 280 | 280 | 100.0 | 68 |
| Reported | ..... | 3,468 | 89.6 | 2,562 | 73.9 | 42,329 | 20,036 | 7,163 | 69,528 | ..... | ..... | 94,601 | ..... | 2,123 | 95.9 | 571 |
| Estimated Unreported | ..... | 401 | .... | 193 | .... | 2,573 | 1,106 | 447 | 4,126 | ..... | ..... | 1,907 | ..... | 91 | .... | 34 |
| *Estimated Total U.S. April 11, 1936 | 3,869 | 3,869 | .... | 2,755 | .... | 44,902 | 21,142 | 7,610 | 73,654 | ..... | ..... | 96,508 | 2,214 | 2,214 | .... | 605 |
| *Estimated Total U.S. April 4, 1936 | 3,869 | 3,869 | .... | 2,690 | .... | 45,168 | 21,130 | 7,573 | 73,871 | ..... | ..... | 96,228 | 2,214 | 2,214 | .... | 580 |
| U.S.B. of M., April 1935 | ..... | .... | .... | 2,502 | .... | †37,867 | †20,351 | †6,175 | †64,393 | ..... | ..... | †97,727 | ..... | .... | .... | 520 |

*Bureau of Mines basis currently estimated. †As of April 30, 1935.

storage dropped 212,341 barrels to 3,698,327 barrels on February 29. Total underproduction indicated by the report was 639,776 barrels, or approximately two percent of the total allowable fixed by Railroad Commission orders.

During the month pipe line companies received 31,412,165 barrels which was 193,081 barrels more than producers reported delivered to the lines.

Tank car shipments totaled 54,813; trucks transported 109,796 barrels; 38,038 barrels were used for fuel; and 33,060 barrels were absorbed for miscellaneous purposes.

## ALLOWABLE CUT

**Austin.**—The railroad commission has issued an order effective April 14 reducing allowables in the Corpus Christi field, Nueces County, to 100 barrels per day per well.

The former allowable was 150 barrels per day, but a reduction was ordered when the Commission found that gas-oil ratios in the field were becoming excessive.

In March every well in the field except two were producing with a gas-oil ratio of 3000/1 or less. Recent tests, however, showed that the average ratio was above 15000/1.

The commission will hold a hearing at Corpus Christi on May 7 to take evidence relating to conditions in the field and to determine what orders will be proper.

## DELAY OPERATION

### Gulf may not start using its New Mexico line

**Hobbs.**—Operation of Gulf Refining Company, pipe line division's eight-inch trunk line system, linking the principal oil fields in Lea County, New Mexico, with the company's West Texas system near Hendrick field, Winkler County, Texas, may be deferred until the close of the year. Reports indicate that Gulf Oil Corporation has contracted to sell its Lea County production to Shell Petroleum Corporation and The Texas Company during the remainder of the year.

The crude contracts were consummated after the company constructed 57½ miles of eight-inch welded line due north from Hendrick station to a terminal opposite the Monument field, with lateral lines connecting with gathering systems in the Eunice, Monument and Hobbs fields. Gulf Oil Corporation's proration quota for Lea County amounts to 7477 barrels daily.

## GASOLINE LINE

**Houston.**—Construction on Humble Oil & Refining Company's eight-inch "petroleum products" pipe line that will extend from the East Texas field to the Baytown refinery has been about 35 percent completed, and will be placed in operation during the early summer months. The line will be a welded carrier about 300 miles in length, the East Texas terminal being at a point near the company's large natural gasoline plant. Both new and reconditioned pipe was used in construction of the line. The route roughly parallels that of the company's principal oil line.

## EARNINGS

Information has been given out lately on the 1935 earnings of two of the Standard Oil companies. Standard Oil Company of California has reported that net profit in 1935 was equal to $1.42 per share on the outstanding stock, an increase of 2 cents over 1934. Earned surplus increased $720,299 after deducting dividends and other charges. At the end of the year the company had 36,232,767 barrels of crude oil in storage, valued at 88.7 cents a barrel.

Standard Oil Company of Indiana reported net profit of $30,179,895 for 1935, the most since 1930. The 1935 profit was equal to $1.98 a share on 15,215,677 shares outstanding at the end of the year, compared with $1.25 a share in 1934, when the net income was $18,949,680. The company's sales volume in 1935 represented an increase of about 10 percent. The report of the company stated that because of chain store legislation the company was gradually going out of retail operations and was turning owned stations over to former employes and others to operate as independent dealers.

---

**M. V. BARINOV,** chief of the various Russian oil trusts, is visiting in New York.

# CRUDE OIL PRICE QUOTATIONS

**(Figures Represent Basic or Flat Prices—Revised to April 17, 1936)**

| DISTRICT | Low Grav. | Dif. | High Grav. | Date |
|---|---|---|---|---|
| **Oklahoma-Kansas** | 28—$0.94 | 2¢ | 40—$1.18 | 1- 9-36 |
| **N. and N.-C. Texas** | 28— .84 | 2¢ | 40— 1.08 | 1- 9-36 |
| **Texas Panhandle** | | | | |
| Gray County | 34— .86 | 2¢ | 40— .98 | 1- 9-36 |
| Carson-Hutchinson | 34— .81 | 2¢ | 40— .93 | 1- 9-36 |
| **West Texas** | | | | |
| Ector, Pecos, W'kler Crane, Upton, Howard and Glasscock | 29— .76 | 2¢ | 36— .90 | 1-14-36 |
| **West Central Texas** | 28— .84 | 2¢ | 40— 1.08 | 1- 9-36 |
| **East Central Texas** | 28— .91 | 2¢ | 40— 1.15 | 1- 9-36 |
| **East Texas** | *1.15 | | | 1- 9-36 |
| Talco | * .60 | | | 4-15-36 |
| **Texas Gulf Coast** | | | | |
| Anahuac-Dickinson | 30— 1.04 | 2¢ | 40— 1.24 | 1- 9-36 |
| Conroe | 35— 1.24 | 2¢ | 40— 1.34 | 1- 9-36 |
| Tomball | *1.30 | | | 1- 9-36 |
| Cleveland | *1.00 | | | 1-11-34 |
| †Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge | Below 17— .88 | 2¢ | 34— 1.22 | 1- 9-36 |
| **South and S. W. Texas** | Below | | | |
| Refugio (Light) | 17— .88 | 2¢ | 34— 1.22 | 1- 9-36 |
| Refugio (Heavy) | *.90 | | | 1- 9-36 |
| Saxet | *.90 | | | 1- 9-36 |
| Mirando | *.85 | | | 1- 9-36 |
| Pettus | *1.25 | | | 1- 9-36 |
| Salt Flat | *.97 | | | 1-14-36 |
| Darst Creek | *.97 | | | 1-14-36 |
| Port Lavaca | *.97 | | | |
| Plymouth | *.90 | | | 12-17-35 |
| **Arkansas** | | | | |
| El Dorado (Light) and Rainbow | 25— .78 | 2¢ | 40— 1.10 | 1-10-36 |
| El Dorado East Field and Smackover | *.75 | | | 1-10-36 |

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

| DISTRICT | Low Grav. | Dif. | High Grav. | Date |
|---|---|---|---|---|
| **North Louisiana** | 25—$0.78 | 2¢ | 40—$1.10 | 1-10-36 |
| Urania | *.97 | | | 1-10-36 |
| **South Louisiana** | Below | | | |
| Lockport | 19— .92 | 2¢ | 34— 1.22 | 1- 9-36 |
| Iowa, Cameron Mds. | Below 19— .82 | 2¢ | 34— 1.12 | 1- 9-36 |
| **Rocky Mountain States** | | | | |
| Salt Creek | 29— .94 | 2¢ | 40— 1.18 | 1-10-36 |
| Elk Basin | *1.28 | | | 1- 9-36 |
| Grass Creek (Light) | *1.28 | | | 1- 9-36 |
| Grass Creek (Heavy) | * .58 | | | 1- 9-36 |
| Big Muddy | *1.11 | | | 1- 9-36 |
| Rock Creek | *1.12 | | | 1- 9-36 |
| Sunburst | *1.25 | | | 1- 9-36 |
| Lance Creek | *.90 | | | 1- 9-36 |
| Osage | *1.08 | | | |
| Cat Creek | *1.07 | | | 8-25-33 |
| Cut Bank | *1.45 | | | 9-29-33 |
| Pondera | *1.05 | | | 9-29-33 |
| Hog Back, N. M. | *1.00 | | | 9- 8-33 |
| Lea County, N. M. | *.75 | | | 9-29-33 |
| **Mid-West States** | | | | |
| Lima | *1.25 | | | 1-10-36 |
| Illinois | *1.23 | | | 1- 9-36 |
| Princeton | *1.23 | | | 1- 9-36 |
| Western Kentucky | *1.23 | | | 1- 9-36 |
| **Pennsylvania** | | | | |
| Bradford | ‡2.45 | | | 1-13-36 |
| Sw. Pa. Pipe Line | ‡2.17 | | | 1-13-36 |
| Eureka Pipe Line | ‡2.12 | | | 1-13-36 |
| Buckeye Pipe Line | ‡1.97 | | | 1-13-36 |
| Corning Grade | ‡1.42 | | | 1-13-36 |
| **Michigan** | | | | |
| Central Michigan | *1.12 | | | 11- 7-35 |
| Muskegon | *.70-1.00 | | | 12-31-32 |
| **Canada** | | | | |
| Petrolia | ‡2.10 | | | 9- 9-33 |
| Oil Springs | ‡2.17 | | | 9- 9-33 |

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.

## MAJOR PRICE CHANGES

| | Penna. (Nat. Tr.) | Mid.-Cont. (36 Gr.) | Calif. (26 Gr.) |
|---|---|---|---|
| June 19, 1933 | Up 10 | Up 19 | ..... |
| June 26, 1933 | Up 10 | ..... | Up 9-13 |
| July 6, 1933 | Up 13 | Up 10 | ..... |
| July 17, 1933 | Up 15 | ..... | ..... |
| July 28, 1933 | Up 15 | ..... | ..... |
| August 11, 1933 | Up 10 | ..... | ..... |
| August 24, 1933 | ..... | Up 10 | ..... |
| August 30, 1933 | Up 15 | ..... | ..... |
| September 6, 1933 | Up 10 | Up 10 | Up 15 |
| September 8, 1933 | ..... | Up 15 | ..... |
| May 1, 1934 | Up 10 | ..... | ..... |
| November 6, 1934 | Cut 25 | ..... | ..... |
| December 6, 1934 | Cut 25 | ..... | ..... |
| January 4, 1935 | Up 15 | ..... | ..... |
| February 4, 1935 | Up 15 | ..... | ..... |
| May 16, 1935 | Cut 15 | ..... | ..... |
| June 26, 1935 | Cut 15 | ..... | ..... |
| July 16, 1935 | Cut 10 | ..... | ..... |
| August 29, 1935 | ..... | ..... | Cut *40 |
| September 6, 1935 | Up 5 | ..... | ..... |
| October 29, 1935 | Up 15 | ..... | ..... |
| November 1, 1935 | ..... | ..... | Up *28 |
| November 18, 1935 | Up 15 | ..... | ..... |
| December 6, 1935 | ..... | ..... | Up *9 |
| January 9, 1936 | ..... | Up 10 | ..... |
| January 13, 1936 | Up 15 | ..... | ..... |
| February 26, 1936 | ..... | ..... | Up *6 |

## CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅜ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

* All gravities—flat rate.
° Signal Hill 26 gravity.
' Seal Beach 26 gravity.

# CALIFORNIA OIL PRICES

**(All gravities above those quoted take highest prices of that field. Effective February 26, 1936)**

| Gravity | Signal Hill* | Seal Beach Alamitos Heights* | Huntington Beach* | Inglewood | Playa Del Rey* | Olinda Brea Canyon | Athens Rosecrans | Elwood Terrace | Torrance | Richfield | Whittier East Coyote La Habra | Montebello | West Coyote Hills | Santa Fe Springs* | New Hall McKittrick Kern River Round Mountain | Mountain View | Midway-Sunset Buena Vista Hills | Lost Hills | Coalinga | Wheeler Ridge |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-14.9 | $.80 | $.79 | $.78 | $.79 | $.80 | $.76 | ..... | ..... | $.80 | $.76 | $.76 | $.77 | $.78 | ..... | $.70 | ..... | $.70 | $.70 | $.70 | ..... |
| 15-15.9 | .80 | .79 | .78 | .79 | .80 | .76 | ..... | ..... | .80 | .76 | .76 | .77 | .78 | ..... | .70 | ..... | .70 | .70 | .70 | ..... |
| 16-16.9 | .80 | .79 | .78 | .79 | .80 | .76 | ..... | ..... | .80 | .76 | .76 | .77 | .78 | ..... | .70 | ..... | .70 | .70 | .70 | ..... |
| 17-17.9 | .80 | .79 | .78 | .81 | .80 | .76 | ..... | ..... | .80 | .76 | .76 | .77 | .78 | ..... | .70 | ..... | .70 | .70 | .70 | ..... |
| 18-18.9 | .80 | .79 | .78 | .84 | .80 | .78 | ..... | ..... | .82 | .76 | .76 | .77 | .78 | ..... | .70 | ..... | .70 | .70 | .70 | ..... |
| 19-19.9 | .82 | .79 | .82 | .87 | .84 | .81 | ..... | ..... | .85 | .76 | .78 | .77 | .78 | ..... | .70 | $.70 | .74 | .74 | .71 | $.70 |
| 20-20.9 | .85 | .79 | .85 | .90 | .88 | .84 | ..... | ..... | .88 | .78 | .82 | .77 | .80 | ..... | ..... | .70 | .78 | .78 | .72 | .70 |
| 21-21.9 | .88 | .79 | .89 | .93 | .93 | .88 | ..... | ..... | .91 | .80 | .85 | .77 | .84 | .78 | ..... | .73 | .82 | .82 | .74 | .70 |
| 22-22.9 | .92 | .82 | .92 | .96 | .98 | .92 | ..... | ..... | .93 | .84 | .89 | .79 | .88 | .78 | ..... | .77 | .87 | .86 | .78 | .72 |
| 23-23.9 | .95 | .86 | .96 | .99 | 1.02 | .96 | $.84 | ..... | .96 | .88 | .93 | .82 | .92 | .78 | ..... | .80 | .92 | .90 | .82 | .76 |
| 24-24.9 | .99 | .91 | 1.00 | 1.02 | 1.06 | .99 | .88 | ..... | .99 | .91 | .96 | .85 | .96 | .82 | ..... | .84 | .97 | .94 | .86 | .79 |
| 25-25.9 | 1.03 | .95 | 1.03 | 1.05 | 1.11 | 1.03 | .93 | ..... | 1.02 | .95 | ..... | .89 | .99 | .86 | ..... | .88 | 1.01 | .98 | .90 | .83 |
| 26-26.9 | 1.06 | 1.00 | 1.07 | 1.09 | 1.16 | 1.06 | .98 | ..... | 1.05 | .98 | ..... | .92 | 1.03 | .90 | ..... | .91 | 1.06 | 1.02 | ..... | ..... |
| 27-27.9 | 1.10 | 1.05 | 1.11 | 1.12 | ..... | 1.10 | 1.03 | ..... | ..... | 1.02 | ..... | .96 | 1.06 | .95 | ..... | .95 | 1.10 | 1.06 | ..... | ..... |
| 28-28.9 | 1.14 | 1.10 | 1.14 | 1.15 | ..... | 1.14 | 1.07 | ..... | ..... | 1.06 | ..... | .99 | 1.10 | .99 | ..... | .99 | 1.15 | 1.10 | ..... | ..... |
| 29-29.9 | 1.17 | 1.15 | 1.18 | 1.18 | F.O.B. | 1.17 | 1.12 | ..... | ..... | 1.09 | ..... | 1.03 | 1.14 | 1.08 | ..... | 1.02 | 1.20 | 1.14 | ..... | ..... |
| 30-30.9 | 1.21 | 1.19 | 1.22 | 1.21 | Pipe | 1.21 | 1.17 | F.O.B. | ..... | ..... | ..... | 1.07 | 1.17 | 1.08 | ..... | 1.06 | 1.25 | 1.18 | ..... | ..... |
| 31-31.9 | .... | .... | .... | 1.24 | Line | 1.24 | 1.22 | Ship | Kettleman Hills | | | 1.11 | 1.21 | 1.12 | ..... | 1.09 | 1.29 | ..... | ..... | ..... |
| 32-32.9 | .... | .... | .... | 1.27 | .... | 1.27 | 1.27 | .... | | | | 1.14 | 1.25 | 1.16 | ..... | 1.13 | 1.34 | ..... | ..... | ..... |
| 33-33.9 | .... | .... | .... | .... | .... | .... | 1.32 | $1.28 | | 1.19 | | 1.18 | 1.28 | 1.20 | ..... | 1.17 | 1.38 | ..... | ..... | ..... |
| 34-34.9 | .... | .... | .... | .... | .... | .... | 1.37 | 1.32 | ..... | 1.23 | ..... | 1.22 | 1.32 | 1.25 | ..... | 1.20 | ..... | ..... | ..... | ..... |
| 35-35.9 | .... | .... | .... | .... | .... | .... | 1.42 | 1.35 | ..... | 1.27 | ..... | 1.25 | ..... | 1.29 | ..... | ..... | ..... | ..... | ..... | ..... |
| 36-36.9 | .... | .... | .... | .... | .... | .... | 1.46 | 1.39 | ..... | 1.31 | ..... | 1.29 | ..... | 1.33 | ..... | ..... | ..... | ..... | ..... | ..... |
| 37-37.9 | .... | .... | .... | .... | .... | .... | 1.51 | 1.43 | ..... | 1.35 | ..... | 1.32 | ..... | 1.37 | ..... | ..... | ..... | ..... | ..... | ..... |
| 38-38.9 | .... | .... | .... | .... | .... | .... | 1.56 | .... | ..... | 1.39 | ..... | 1.36 | ..... | 1.42 | ..... | ..... | ..... | ..... | ..... | ..... |
| 39-39.9 | .... | .... | .... | .... | .... | .... | 1.61 | .... | ..... | 1.43 | ..... | 1.40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 40-40.9 | .... | .... | .... | .... | .... | .... | 1.66 | .... | ..... | ..... | ..... | 1.43 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

* Price effective March 6, 1936.

# GRAY

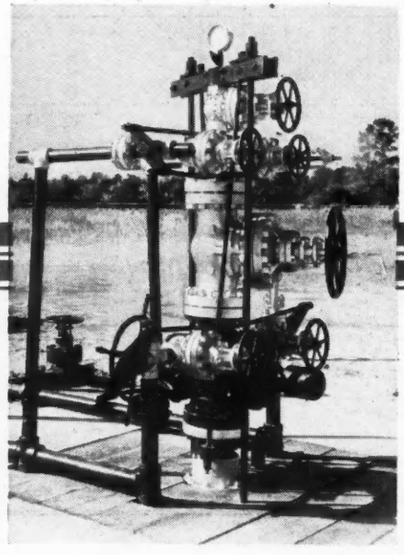
## YOU BENEFIT FROM THESE ADVANTAGES and ECONOMIES

1. **CONCENTRATION OF NUMEROUS PARTS INTO ONE** effects true economy without sacrificing quality.

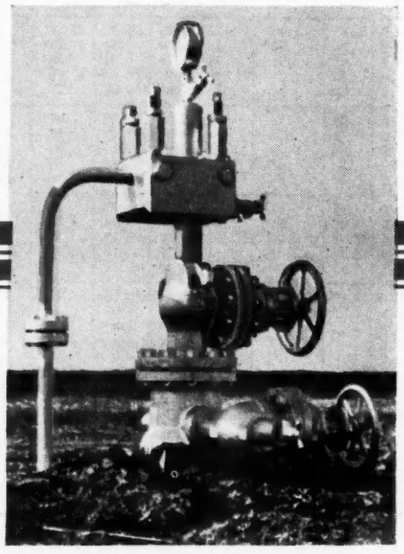
2. **ANOTHER STEP TOWARD REDUCING AREAS AFFECTED BY PRESSURE** resulting in safer and easier operation.

3. **COMPACTNESS . . .** reduces height, resulting in rigidity and freedom from vibration.

4. **REPLACEABLE VALVES AND SEATS** provide for repairs in the field, over the entire flowing life of the well.



CONVENTIONAL GRAY
CHRISTMAS TREE

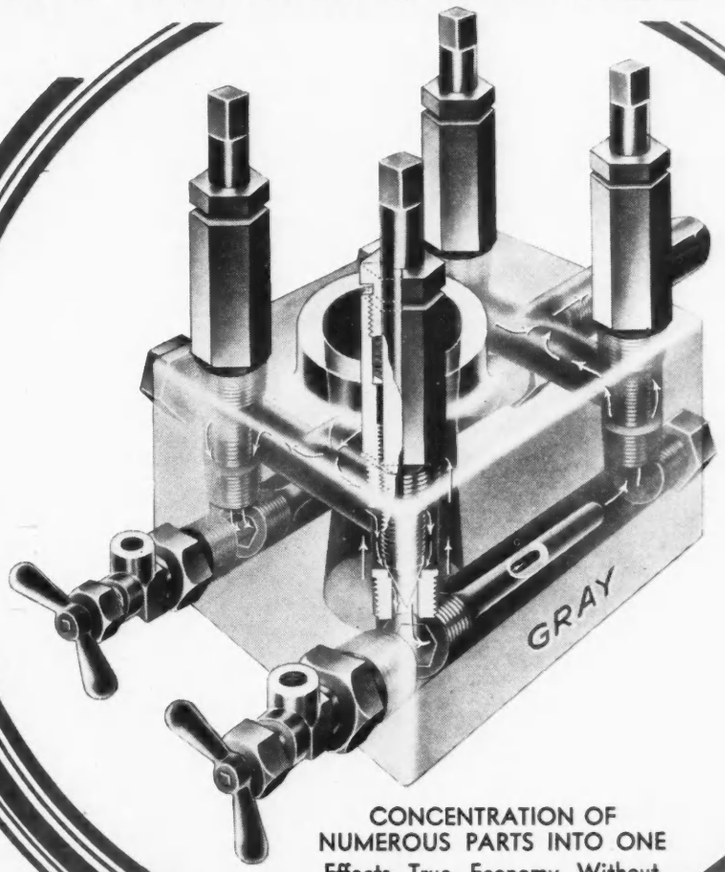


CONCENTRATED CONTROL
With Gray Composite Manifold

# Composite Manifold

## CONCENTRATED CONTROL

## A CHRISTMAS TREE AND FLOW LINE MANIFOLD ALL IN ONE . .




CONCENTRATION OF
NUMEROUS PARTS INTO ONE
Effects True Economy Without
Sacrificing Quality

**PROVEN IN THE FIELD Through Use on 20 of the Higher Pressure Gulf Coast Wells.**
We can now state conservatively that the Gray Composite Manifold is ready for general trade acceptance.

# GRAY
## TOOL COMPANY
**HOUSTON – TEXAS**

Edited by
WM. V. GROSS, Associate Editor

# *Venezuela*

## VISITING OFFICIAL REPORTS CONDITIONS ENCOURAGING

An American oil executive visiting in Venezuela just prior to the national presidential election scheduled for April 19, found General Lopez Contreras, the provisional president, a progressive leader who has had a difficult road to travel following death of the late President Gomez, who ruled as dictator of Venezuela for more than a quarter of a century.

In speaking of conditions prevalent during the provisional government, the executive says in a note to THE OIL WEEKLY it was inevitable that after any major political upheaval all groups should endeavor to make themselves heard at once. "Lopez Contreras appears to be conscientiously trying to allow all factions a chance to present their cases"—and—"it is generally hoped that after the elections April 19 the government will settle down to a more definite policy."

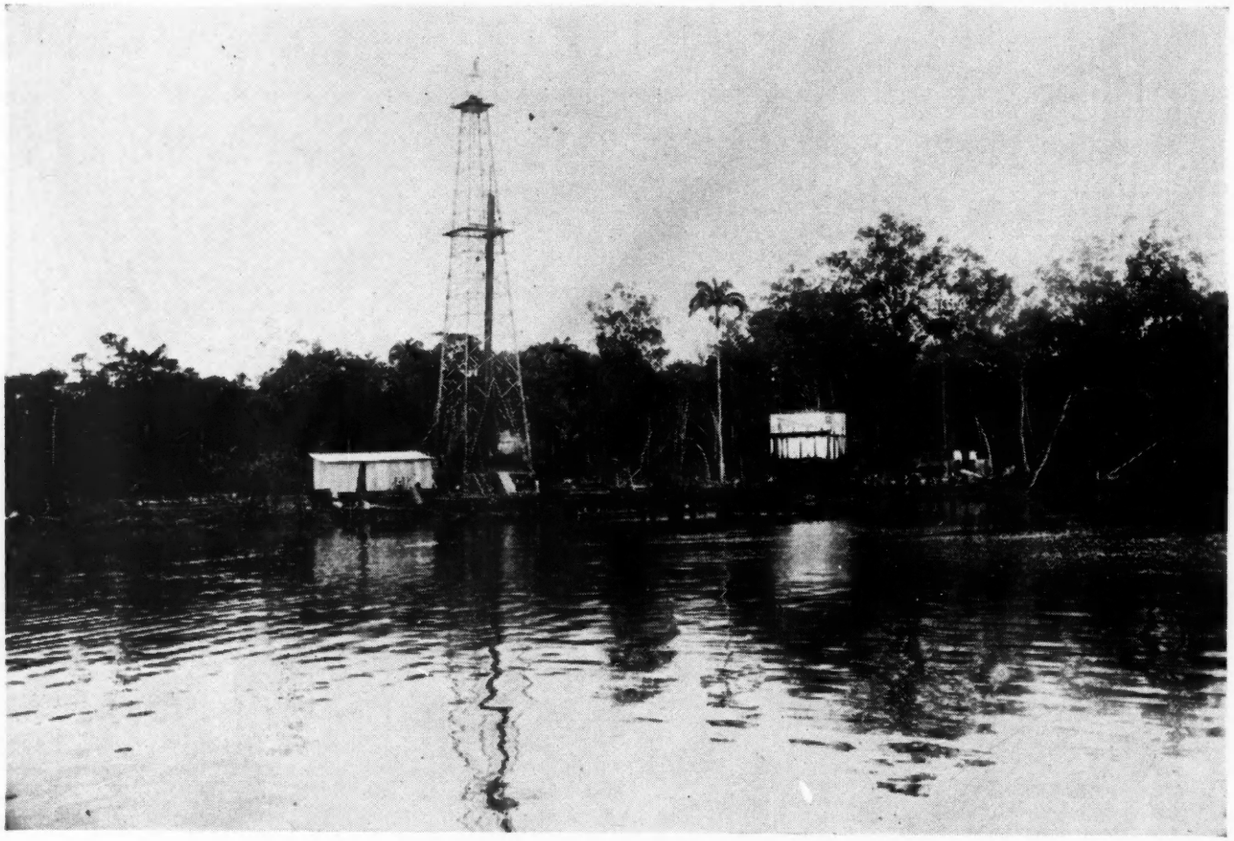
Reference has been made in press dispatches from Venezuela to the spread of communism there, and on this subject the executive's communication observes: "I do not believe the Venezuelan people themselves want communism. The usual groups of professional agitators have taken advantage of the natural excitement following the death of President Gomez to endeavor to incite class strife and hatred of foreigners. In some instances such agitators have been thrown bodily out of meetings of various labor groups."

With the exception of a few bonds, Venezuela's internal debt has all been paid. The nation has had no foreign debt in years, due largely to revenue from petroleum which today is understood to exceed even that derived from customs.

Although Venezuela produced more than 148 million barrels last year, an increase of 9 percent over production in 1934, the letter states, no new fields were discovered, notwithstanding considerable geophysical work. Currently drilling wildcats consist largely of those drilling for deeper sands.

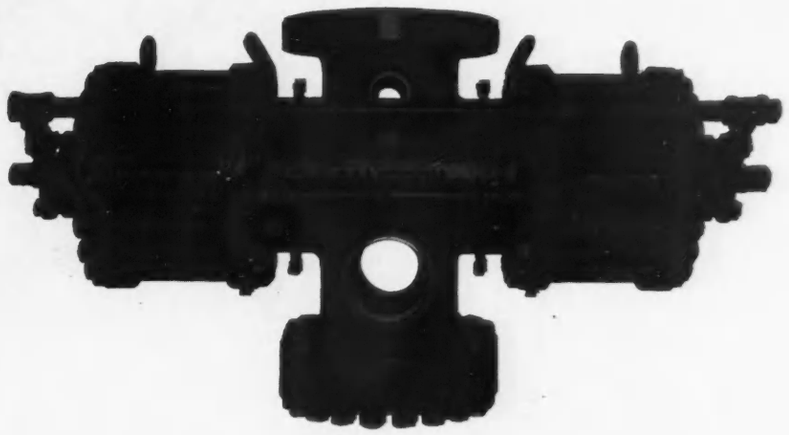
### Repressuring

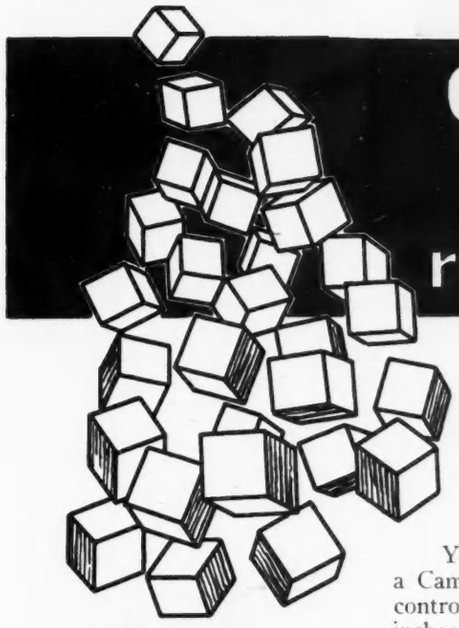
To the technologist there were several points of interest in the letter. In the first place, repressuring is generally used to aid in prolonging productive life and



**San Juan wildcat in Venezuela. The derrick is built on timber mats.**

# 28





## CUBIC INCHES OF *SELF-FEEDING* ram packing in reserve

## in this CAMERON 13⅜" type "SDA" blowout preventer

*(Above) Cameron self-centering pipe ram, and Cameron Self-Feeding Ram Packing Element, both standard equipment in Type "SDA" Blowout Preventers. Packing Element is a moulded block of Duprene rubber, supported top and bottom by heavy steel retainer plates. When rams are closed, retainer plates in opposing rams contact and packing is then entirely enclosed by steel. Closing pressure forces packing to flow to pipe surface, making a positive, leak-proof shut-off. Wear on packing due to rotation or spudding of drill pipe through closed rams is automatically taken up and a perfect seal maintained constantly.*

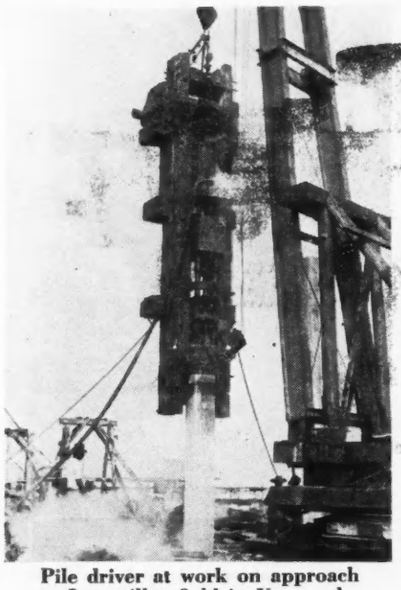
You can wear off 26 cubic inches of packing material from the rams of a Cameron Type "SDA" 13⅜" Blowout Preventer—and still have complete control over the highest well pressure. This is because a reserve of 14 cubic inches of packing is built into each new 13⅜" Cameron Self-Feeding Ram Packing Element, a total of 28 cubic inches . . . and every inch will feed out automatically as needed to maintain a shut-off around your drill pipe.

Because of this revolutionary construction, catching and holding a blowout with this great new preventer is only one of the important things you can do. While circulating to increase the weight of your fluid column you can also, with complete and positive safety, rotate and raise and lower your drill pipe to prevent sticking. This extra and very valuable advantage, not provided by conventional types of preventers, will save you hundreds of dollars in fishing costs during the long life of your Type "SDA" Preventer. With a hook-up of two Type "SDA" preventers (and many such hook-ups are now in daily use!) you can even lubricate your drill pipe back to bottom with complete safety—if necessary to regain control.

Since it costs no more, why not get all the advantages and features of an "SDA" in the next blowout preventer you buy? Full and complete details will gladly be forwarded to any operator on request.

**CAMERON IRON WORKS, INC.**
**711 MILBY STREET HOUSTON, TEXAS**

EXPORT OFFICE: 74 Trinity Place, New York, N. Y.
MIDLAND: W. P. (RED) Knight - - - - BEAUMONT: C. A. Muncey
OKLAHOMA & KANSAS: Carson Machine & Supply Co.



**Pile driver at work on approach to Lagunillas field in Venezuela.**

assist in obtaining maximum ultimate recovery from fields in Venezuela. Referring to Quiriquire field in this connection, the letter states: "Even today there is no definite picture as to the underground structure in Quiriquire field, due to the number of faults and non-conformities. It is difficult to locate with any certainty the closed end of the structure, so that repressuring work is consequently handicapped."

"Well locations in swamps and in dense jungles," the letter states, "have led to experimentation with Diesel and Diesel-electric drilling units in some parts of Eastern Venezuela. Because of low fuel consumption and because of reduction of bulk in transportation, the Diesel seems to have proven useful in locations far distant from the main base of operations. A Diesel-electric unit is being used in one spot on a jungle river where the power units can be mounted on a separate barge and the electric current conveyed by a flexible cable to the derrick floor."

The tendency of oil operators in Venezuela to employ more and more Venezuelans is growing, in the eastern part of the country particularly. Here about 80 percent of the employees are Venezuelans. "These are being trained for more responsible jobs as rapidly as they can assimilate the necessary technical details." Venezuelan doctors and nurses are being used on staffs of oil company hospitals.

### Employee Welfare

"Both Standard Oil Company of Venezuela and Lago Petroleum Company are continuing their long established programs of constructing modern, sanitated camps for Venezuelan and American personnel as rapidly as the permanency of operations in a particular locality is established. In the next three years it is probable that Standard Oil Company of Venezuela alone will spend more than $600,000 in Caripito, Guiria, Pedernales and Cumarebo for laborers' quarters, recreational centers, market buildings, schools, streets, sanitation and electric lighting."

People and government in Venezuela are becoming conscious of the need of public improvements.

## WIDEN ACTIVITIES

### Anti-trust violation to receive closer scrutiny

WASHINGTON, D. C.

BROADENING of the activities of the Department of Justice to enable it to follow up evidence indicating possible violation of the anti-trust laws by the oil or other industries, developed by the Federal Trade Commission or Senate or House committees, has been asked of the Senate by Assistant Attorney General John Dickinson, it was made known April 16 by the Senate Appropriations Committee.

Appearing before the committee at recent hearings, Dickinson pointed out that it is now necessary for the department to wait until it receives a complaint before it can investigate possible violations, and complained that frequently the department may study a matter for several months without securing evidence that would stand up in court.

An additional $15,000 is expected to be provided in the departmental appropriation bill for the coming fiscal year to develop a sort of general staff to guide and direct investigations for the purpose of possible litigation.

"We have two or three major industries as to which there is a very considerable volume of complaints which have been coming into the department ever since I have been there, and apparently they had been coming in for some months before that time," Dickinson told the committee later, identifying these as the oil and motion pictures industries.

"We have been doing the best we could to track these complaints down. Mr. Hoover's men (Federal Bureau of Investigation) have been assisting us, but we have to send our own attorneys out to different places in the country to see just what the situation is out there; to see whether the complaints that have been checked by Mr. Hoover's men fit together into a pattern of conduct that comes within the anti-trust laws and there is delay.

"There has been some delay because of the comparatively small number of men that we can put on that work, and that has been very troublesome to me. As a matter of fact, in regard to one of these investigations, there was a charge made in the papers just the other day that we were dilatory. That was with regard to the oil industry."

## WILL ASSIST

### Marketing associations to help investigators

WASHINGTON.

ASSISTANCE of the National Oil Marketers Association will be offered the Department of Justice in the special grand jury investigation of oil marketing practices to begin at Madison, Wisconsin, May 4, it was announced by the organization this week.

Declaring that this "will be the first real effort by the Department of Justice to enforce the anti-trust laws against the major oil companies since the Standard Oil dissolution decree was confirmed by the Supreme Court in 1911," Paul E. Hadlick, secretary of the association, pointed out that his organization made the original complaint on which the government's investigation was based.

"For many years," he said, "in fact since the oil trust was formed in 1882, except for a brief period following the abortive dissolution decree of 1911, the so-called Standard Oil Group has dominated and controlled the marketing of petroleum products in the United States."

In recent years, he declared, the major companies have been driving the independent marketer out of business by their practices of fixing the prices at which he must buy and, through subsidiaries in the marketing field, maintaining retail prices which do not leave the independent a sufficient margin.

## SEEK OUTSIDE SUPPLY

### Michigan refiners plan barge-pipeline movement

**Mt. Pleasant, Mich.**—Tentative contracts were reported closed in Detroit Monday to bring approximately 10,000 barrels of Louisiana and Texas crude oil into Michigan daily via lake-river barges and a 360-mile pipe line to supply 5 or more independent refineries. The plan was announced by John Borden, head of Old Dutch Refining Company of Muskegon.

Borden said the plan, which would require about $6,000,000 to finance, is backed by Detroit and Pittsburgh capital, and would take advantage of barge shipments from the Gulf up the Mississippi River into Ohio and then by pipe line into Central Michigan.

Borden declared that the Texas-Louisiana crude could be laid down at 10 cents per barrel less than Michigan crude at the present time. This would require at the well purchase of crude at about 50 to 75 cents per barrel.

Borden declared that "independent refineries" need at least 10,000 barrels daily more crude to meet their commitments, due to marked decline in Michigan production.

## READY TO RUN OIL

### New East Texas line is soon to move crude

**Dallas.**—Initial movement of East Texas crude through American Liberty Pipe Line Company's eight-inch carrier to tank farm and tanker loading terminals at Norsworthy, located on the Houston Ship Channel below Houston, will take place late this month, according to D. R. Zachry, general manager. Two construction crews are engaged in welding the 15-mile unfinished section of the line, and all four main-line booster stations are scheduled to be available for duty prior to May 1.

This transportation unit will have a rated capacity of about 30,000 barrels daily. The company has contracted for the movement of considerable oil on a common carrier basis to the coast, and has been successful in recent months in building up its supply of controlled and purchased crude.

# POWERFUL for Longer Life

Typical "shot" of a Baldwin 1240-88 Super Service Chain on a Deep Drilling Rig.

SEE YOU AT THE INTERNATIONAL PETROLEUM EXPOSITION 1936 9TH WORLD'S FAIR OF THE OIL INDUSTRY TULSA, U.S.A. MAY 16 TO 23

**Deep holes call for the most powerful drilling chain—and that means Baldwin Super Service Oil Field Chain. Its straight side bar construction is mechanically right. The selected steels, and the special heat treatment given every part guarantee correct materials. Baldwin methods of manufacture, such as precision ground pins and bushings supply the accuracy that keeps wear and strain at a minimum.**

**This chain has the *power*—that's why it stands up and gives more feet of drilled hole per dollar. Available in A.P.I. No. 3 and A.P.I. No. 4 sizes.**

# BALDWIN

*ask the Driller .. He Knows*

*Factory Representative:* Geo. J. Fix, Dallas, Texas.
*Export Department:* Oil Industry Appliances Co., 39 Cortlandt St., New York City, N. Y.

**BALDWIN-DUCKWORTH CHAIN CORPORATION**
**Springfield, Massachusetts · Factories at Springfield and Worcester, Mass.**

# *Big Sooner Week*

## SOUTH OKLAHOMA GUSHER VIES WITH MANSION AREA ACTIVITY

WEEKLY STAFF REPORT

**Tulsa.**—The frenzied rush of activiy in the "Mansion Area" of the Oklahoma City pool where court actions, municipal and private opposition and military rule are the order of the day was again the highlight of Oklahoma development news as more than 75 new operations were in the formative stage. Gusher production in the Tipton area of Jackson County in the southwestern part of the state and a new pool in northwestern Seminole County served to push several important wildcat tests into the background. It is reported that the southwestern Oklahoma play has involved the leasing of more than 1,000,000 acres of land since Gulf Oil Corporation discovered production in 1934.

New work in several areas outside of Oklahoma City combined with that area to make another record week when scouts made 89 first reports and reported the completion of 71 operations. This compares with 92 first reports and 51 completions during the preceding week. Oklahoma County again was in the lead with 25 first reports; Pontotoc County had 11; Osage County, 10; Okmulgee County, 9; Hughes County, 7; Seminole County, 4; Carter and Okfuskee Counties, 3 each; Cleveland, Jefferson, Logan, Tillman and Tulsa Counties, 2 each; and Bryan, Comanche, Noble and Pottawatomie Counties, 1 each.

The 71 completions included 47 oil wells with combined initial capacity of 34,103 barrels, three gas wells rated at 16,500,000 cubic feet, 18 dry holes and three abandoned locations. Drilling footage climbed to 165,996 feet which included 11,308 feet in three wildcat tests and 1398 feet in 8 old wells.

### BIG JACKSON WELL
### South Oklahoma receives 4875-barrel producer

**Ardmore.** — Gulf Oil Corporation (Gypsy) focused attention of the Mid-Continent petroleum industry on southwestern Oklahoma early in the week when Boucher 4, SE SW SW 32-1n-19w, in the Tipton pool of northeastern Jackson County, flowed 4875 barrels of 41-gravity oil in 24 hours from Cisco "sand" at 2652 to 2655 feet. This is the largest production so far found in the wide exploratory campaign which has been carried on for the past year in several southwestern counties, and it ranks as one of the biggest wells completed in southern Oklahoma during the past ten or twelve years.

Gulf Oil Corporation attracted first attention to the Jackson County area early in 1934 when S. B. Kelly 1, NE NE NE 10-1n-20w, five miles southeast of Altus, encountered a showing of oil at 1680 to 1703 feet. Later the test was drilled to 2080 feet, plugged back to test the upper showing and was abandoned after a fishing job. The same operator's Kelly 1-B, SE NE NE NE 10-1n-20w, encountered granite wash at 1412 to 1435 feet and was completed at 1441 feet for 247 barrels of 45-gravity oil swabbing and flowing. This precipitated the campaign which has brought about the drilling of a large number of tests and has revealed production in several horizons below the granite wash. The Tipton pool was discovered by Gulf Oil Corporation's (Gypsy) Boucher 1, NW SW SW 32-1n-19w, three miles southeast of the town of Tipton and six miles southeast of the Altus pool. This well was completed in October, 1935, flowing 147 barrels initially from Cisco "sand" at 2595 to 2607 feet, the total depth.

Tests drilling in the area are as follows: Gulf Oil Corporation's Boucher 5, NW SE SW 32-1n-19w, drilling below 1225 feet; the same operator's Shirley 1, NE NW NE 6-1s-19w, drilling below 2150 feet; C. P. Burnham's Oliver 1, NW NW NW 26-1n-20w, waiting on cement to set on six-inch casing after water broke in around the eight-inch; and Gulf Oil Corporation's Byrd 2, SE SW NW 14-1n-20w, cleaning out and swabbing with total depth at 1502 feet in granite wash showing oil. The two latter tests are in the Altus pool. William H. Rogers who owns the quarter-section offsetting the Boucher lease to the east sold an undivided half-interest in 15 acres of royalty for $5000 early in the week.

Sinclair Prairie Oil Company's Stockton 1, SE SE SW 26-6s-2w, 16 miles northwest of Marietta in northwestern Love County, was the deepest drilling well in the state as it drilled below 7430 feet in gray and maroon shales of lower Pennsylvanian age. However, this record was being closely pushed by another test in the same part of the state as Amerada Petroleum Corporation and Stanolind Oil and Gas Company drilled ahead below 7250 feet in Westheimer 2, SW SE SW 27-6s-2e, five miles northeast of Marietta in the northeastern part of Love County. The formation in the last several hundred feet of hole has been mostly limestone and no coring has been done. In the upper part of the Simpson Group which was topped at 3515 feet formation dips as high as 85 degrees were indicated in cores. Whether such dips have persisted to the present drilling depth is not known but apparently the thickness of the Simpson Group has been greatly exaggerated due to drilling in sharply tilted beds.

In the next township north of the Stockton test but over the line in southern Carter County, Carter Oil Company had dry sand from 3100 to 3113 feet and was drilling below 3480 feet in Walker-Vorhees 1, C SE SW 34-5s-2w, near the center of a large block which has been assembled during the past 18 months. Lease buying in the general area was reported to be picking up again after slumping from boom proportions several months ago.

Carter Oil Company et al's Williams 1, SW NE SW 27-2s-3w, Simpson discovery well in the old Fox pool of northwestern Carter County, flowed 1723 barrels on a gauge early in the week and was shut in during the remainder of the week. Production from this well is coming from Simpson dolomite at 8074 to 8098 feet with total depth at 8105 feet, making it the deepest production of commercial proportion in the Mid-Continent area. Only one other well in Oklahoma is producing from a greater depth, that being Denver Producing and Refining Company's Adah Noe 1, NW SW SW 34-10n-10w. This well is capable of making about 60 barrels per day from 10,000 feet on artificial lift. Denver Producing and Refining Company's Sah-Cam 1, C SE SE 33-10n-10w, second test in the Binger pool and approximately 1000 feet southwest of the discovery well, is reported definitely abandoned after being drilled to 10,086 feet.

A wildcat that is running high and obtaining evidences of saturation in Coal County was the principal item reported from the Graben area during the week.

Eight miles northeast of the "Centrahoma test" in northern Coal County, Shell Petroleum Corporation's Hill 3, SE SE NW 30-3n-10e, cored from 5800 to 5813 feet in very tight sand and dolomite, recovering a slight showing of gas and an odor of oil. No change was reported in the second core from 5813 to 5822 feet, except that the showings were absent. It was coring ahead below 5822 feet and running several hundred feet higher than the nearest reference test.

Recalibration of instruments used in measuring formation pressures in the Fitts pool resulted in an increase in 25 key wells between the March 2 and April 2 test periods. Zone 2, in the middle portion of the pool, increased from 1429 to 1457.5 pounds per square inch with a production of 415,926 barrels, an increase of .0685 pounds per 1000 barrels of oil. Zone

# *Rental...*

# TOOL SERVICE

Complete stock of all type tools ready for immediate service, such as—

## Surface Casing Tools

from 20 in. to 9⅝ in. Spider and Slip with Wilson side door elevators and tongs.

## Oil String Tools

Complete stock of Butler, Taylor and Ideal Automatic Slip Elevators and Spiders in sizes 10¾ in. O. D. to 5 in. O. D. to set from one to 10,000 feet.

## Tubing Tools

Spiders and Slips—Triple Extra Heavy Wilson Elevators and Tongs, standard and deep well type.

## High Pressure Drilling Gate Valves

13⅜ in. to 8⅝ in. for rent or sale. These rental tools thoroughly tested after each job and guaranteed to be in first class condition.

**BRAKE LINING** Emsco Engineered rotary brake blocks and Emsco Regular Woven Lining with Brake Band Exchange Service.

**ROTARY HOSE** Grizzly Power Flex, Rotary Hose and Drill Pipe Protectors.

***See Us Before Leaving the Houston Show***

**PHONE F.9339**

***Complete line of Drilling Equipment for Sale and Service***

**INDEPENDENT PIPE & SUPPLY CO., INC.**

***EVERYTHING FOR THE OIL COUNTRY***

**NEW — USED — RENEWED**

**2311 WEST STREET HOUSTON, TEXAS**

3, the eastern and newest part of the pool, increased from 1642.6 to 1657.8 pounds with production of 248,689 barrels, an increase of .0611 pounds per 1000 barrels. Zone 1, the western and oldest part of the pool, declined from 1300.1 to 1276.39 pounds with production of 819,608 barrels, a decline of .0289 pounds per 1000 barrels. All potential gauges and all production is obtained through 2½-inch tubing as required by rules of the corporation commission.

### Cleveland County

The Moore pool in northern Cleveland County had its third gusher well, the second completed during the week, when Sinclair Prairie Oil Company et al's Rice 1, NE NE NE 28-10n-2w, four locations south and two east of the discovery well, flowed 275 barrels the first 10 minutes through casing, 120 barrels the next hour and 316 barrels the second hour through 2½-inch tubing against back pressure of 1600 pounds. Gravity of the oil is 42.3 degrees corrected. The new well encountered Wilcox sand at 7280 feet, was drilled to 7312 feet and washed in with water and gas. Early in the week the same operators' Marvel 1, NW SW NE 21-10n-2w, three locations north and one west of the discovery well, flowed 630 barrels in 20 minutes through the casing and then averaged 147 barrels per hour through 2½-inch tubing. Production is from Wilcox at 7240-67 feet.

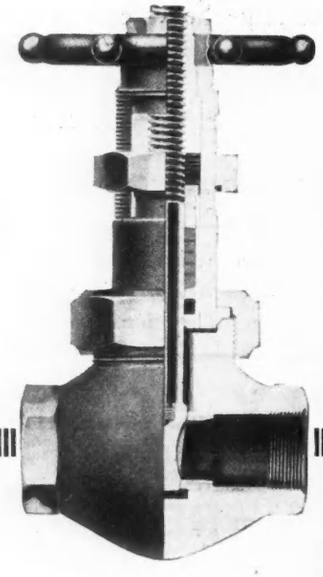
Billings area of northwestern Noble County received a setback with the failure of a test less than one-half mile from the discovery to find Wilcox sand. Tide Water Oil Company's O'Neil 1-A, SE SW NE 16-23n-2w, had a part of the Lower Simpson grouped and went into Arbuckle lime at 4530 feet. At 4535 feet it had 1000 feet of salt water in the hole in five hours and was plugged back to 4500 feet where it was waiting on cement to set. On the lease offsetting the discovery tract the discoverers

# OKLAHOMA

## Completions

| Company, Wel and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ATOKA COUNTY— | | |
| Sears, Downing 1, se se nw 17-1s-14e | lcn. | abd. |
| Davis 1, se se se 18-1s-14e | lcn. | abd. |
| Vierson et al, Williams 1, ne sw nw 34-2s-10e | * | 4930 |
| CADDO COUNTY— | | |
| English Drlg., Gaffney 2, sw nw se 31-6n-9w | * | 2325 |
| CARTER COUNTY— | | |
| Skelly, Fee No. 199 2, ne nw se 17-2s-2w | lcn. | abd. |
| Jones Bros. et al, Sullivan 3, se nw se 36-4s-2w (pb 2615) | * | 2693 |
| Coline Oil, Ferguson 6, nw se nw 6-4s-3w (otd 1123) | 14 | 1151 |
| CHOCTAW COUNTY— | | |
| Bobby Burns, Hallum 1, ne nw nw 4-7s-20e | * | 75 |
| COMANCHE COUNTY— | | |
| Replogle & Clements, Shull 1, csw sw 29-2n-10w | * | 565 |
| George Pace et al, Spencer 1, sw sw sw 21-3n-10w (pb 1850) | ¶1 | 4164 |
| CREEK COUNTY— | | |
| Wasson & McNamara, Posey 1, se sw sw 22-18n-9e | * | 3104 |
| Sinclair Prairie, Long 9, ne sw sw 9-18n-7e (otd 2573) (pb 2726) | 5 | 2761 |
| Deep Rock Oil, Marrs 2, se nw sw 6-18n-7e | 148 | 2565 |
| Sinclair Prairie, Litchfield 4, nw nw ne 21-17n-7e (otd 2687) | 15 | 2915 |
| Wood Oil, Robinson 1-A, cel nw nw 12-17n-6e (pb 2380) | 62 | 2899 |
| Franchot et al, Garrett 5, cne sw 16-16n-10e | 1 | 2932 |
| HUGHES COUNTY— | | |
| Carter Oil, Hampton 1, ne ne ne 1-9n-8e | 90 | 1749 |
| Chapman, Fee 1, se ne nw 1-9n-8e | 440 | 1722 |
| Manahan Oil, Oliphant "C" 6, nw ne sw 1-9n-8e | 461 | 1718 |
| Mid-Continent, Hampton 2, nw sw ne 1-9n-8e | 432 | 1707 |
| Sinclair Prairie, Oliphant 6, nw nw se 1-9n-8e | 705 | 1711 |
| Manahan Oil, Dixon "C" 4, ne nw ne 12-9n-8e | 45 | 1755 |
| Fitzpatrick, Culver 1-A, ne nw nw 13-9n-8e | * | 1884 |
| KAY COUNTY— | | |
| Black Gold Pet., Cooley 1, ne nw sw 25-28n-4e | * | 2214 |
| Kansas-Oklahoma O&G, Sherbon 1, csw sw 20-29n-1e | * | 1590 |
| LOGAN COUNTY— | | |
| Stanolind et al, Bird 1, sw sw ne 20-18n-4w | ¶11¾-1104 | 6145 |
| Phillips Pet., Pfieffer 2, cn½ nw ne 4-19n-2w | 862 | 5125 |
| MARSHALL COUNTY— | | |
| Leavell Coal, Brent 4, ne nw se 1-8s-5e | 35 | 555 |
| Kingston O&G, Felts 3, sw ne nw 6-8s-8e | 24 | 550 |
| McINTOSH COUNTY— | | |
| Okla. Oil Corp., Janie Wolf 1-A, se sw se 35-12n-17e | * | 3570 |
| MUSKOGEE COUNTY— | | |
| Foltz, Barnett 2, sw sw ne 17-14n-17e | 98 | 1894 |
| Goldport et al, Bartholet 1, se sw nw 17-14n-17e | * | 2460 |
| Mussellum, Bartlett 1, se nw ne 17-14n-17e | * | 2060 |
| OKFUSKEE COUNTY— | | |
| Amerada & Stanolind, Carolina 1, sw sw sw 31-10n-9e | 344 | 1757 |
| Staples, Holmes 1-A, sw nw sw 22-12n-11e (pb 1849) | 5 | 1853 |
| Carter Oil, Dill 4, csw se 2-11n-8e | 528 | 3903 |
| OKLAHOMA COUNTY— | | |
| British-American, Winders 1, se sw sw 23-12n-3w | ¶11-2354 | 6518 |
| OKMULGEE COUNTY— | | |
| Vincent, Yarhola 1, sw sw nw 18-13n-11e | ¶15 | 2583 |
| Sinclair Prairie, Flanagan 3, nw nw nw 26-13n-12e (otd 2852) | 3 | 3074 |
| Geiger, Colbert 1-A, csl nw nw 22-14n-12e (otd 1756) | * | 2022 |
| Aggis Drlg., Osborn 1-A, ne ne nw 21-15n-14e | * | 1720 |
| Misener, Myers 1-A, sw se ne 28-15n-14e | 3 | 656 |
| Klingensmith, Adams 4-A, nw ne sw 35-16n-11e (pb 2297) | 8 | 2301 |
| OSAGE COUNTY— | | |
| Champlin Ref. 5, se ne ne 17-24n-7e | 40 | 2637 |
| Lewis Prod. & Texas, Claremore 5, sw ne se 17-24n-7e | 171 | 2624 |
| Continental, 11, se ne se 21-24n-7e | 95 | 2617 |
| Harlon Oil, 76, sw ne nw 25-24n-11e | * | 1736 |
| Carter et al, 10, sw se se 3-25n-6e | ¶8-2040 | 2785 |
| Skelly 1, se sw nw 26-26n-6e | ¶2¼-2399 | 2945 |
| Kewanee Oil, Renald 6, ne nw sw 26-26n-6e | 2390 | 2933 |
| PAWNEE COUNTY— | | |
| Krasne Drlg., Mitchell 3-A, cnl nw se 27-20n-9e | 1 | 547 |
| Johnson O&R, Skully 1-A, ne nw ne 25-21n-7e (otd 2734) | 35 | 2784 |
| PONTOTOC COUNTY— | | |
| Clark-Cowden, Summers 5, ne ne sw 17-2n-7e | 30 | 1698 |
| Manahan Oil, Wagner 6, nw nw sw 17-2n-7e | 60 | 1758 |
| Magnolia Pet., Burris "B" 2, nw se ne 28-2n-7e | ¶2½-1515 | 4270 |
| Moore, McKoy 8, se sw sw 28-2n-7e | ¶1½-2836 | 4407 |
| Skelly, Park College 7, sw nw ne 28-2n-7e | ¶2¼ 3921 | 4305 |
| Stahl, Dennis 2, nw ne nw 28-2n-7e | ¶1¼-3078 | 4285 |
| Moore, Harper 5, sw nw ne 29-2n-7e | ¶1½-1272 | 3750 |
| Moore, Wirick 1-B, se se sw 29-2n-7e | ¶2-5155 | 4428 |
| Carter Oil, Richards 5, sw nw se 30-2n-7e (otd 4180) | ¶1¼-262 | 4401 |
| Sinclair Prairie, Ralls 8, cnl ne sw 28-5n-8e | 20 | 822 |
| POTTAWATOMIE COUNTY— | | |
| Conley, Vinson 2, sw ne ne 13-7n-4e | 250 | 4072 |
| SEMINOLE COUNTY— | | |
| Spears & Foster, Billington 1, se se sw 28-7n-6e (pb 2425) | * | 2940 |
| Amerada, Klingensmith 1, se sw ne 23-9n-6e (pb 4054) | 137 | 4145 |
| Wood Oil, Homestake 2, sw ne sw 28-9n-6e | 280 | 4147 |
| Carter Oil, Saul 1, cn½ se ne 3-10n-6e | * | 4169 |
| Gulf Oil et al, Scott 2, cwl ne nw 11-10n-6e | 216 | 4152 |
| Carter Oil, McDonald 1, cw½ ne nw 23-10n-6e (pb 4222) | 114 | 4236 |
| STEPHENS COUNTY— | | |
| George Pace, Allen 10, ne ne ne 3-2s-8w | * | 2238 |
| TULSA COUNTY— | | |
| Anthony, Fee 4, sw sw nw 3-16n-12e (otd 1700) | ¶1½ | 1895 |

*Failures; †Junked; ¶Million cu. ft. gas.

VOGT

*Drop Forged Steel*

GATE VALVE

**For 600 pounds working pressure at 900 F. —or for 1500 pounds cold working pressure.**

**Union Bonnet . . . Ground Joint . . . Outside Screw and Yoke . . . Removable Seats . . . Solid Wedge . . . Stainless Steel Trimmings.**

***Carried in Stock in sizes ⅜" to 2" inclusive.***

MAINTENANCE

ENGINEERING CORPORATION

1400 CONTI ST. P. 6338 L.D. 409

HOUSTON, TEXAS

# SEISMIC SURVEYS

EFFICIENTLY CONDUCTED
SUCCESSFULLY INTERPRETED

BY

POINTING THE WAY
IXC
FOR THE DRILL

## INDEPENDENT EXPLORATION COMPANY

ESPERSON BLDG. HOUSTON, TEXAS

E. E. ROSAIRE, PRESIDENT

OFFERING EXPERIENCED CREWS FOR CONTRACT WORK,
AND OPERATING IN AREAS OTHER THAN THE TEXAS-LOUISIANA GULF COAST

AS

PATHFINDER PROSPECTING COMPANY

J. L. ADLER, PRESIDENT
2011 Esperson Building
Houston, Texas

IN THE

EASTERN UNITED STATES
AND FOREIGN COUNTRIES

COLORADO GEOPHYSICAL CORPORATION

J. H. WILSON, PRESIDENT
610 Midland Savings Building
Denver, Colorado

IN THE

WESTERN
UNITED STATES

# *Two New Fields*

## ARE FOUND IN KANSAS AND OTHERS GET EXTENSIONS

WEEKLY STAFF REPORT

**Wichita.**—Two new pools and the extension of several others were credited to Kansas development during the week when new work slowed down and completions remained at about the normal level.

Scouts made 39 first reports compared to 54 during the preceding week. Rice County took the new work lead with 8 first reports; Cowley and Russell Counties had 5 each; Reno County, 4; Butler, Ellis and Ellsworth, 3 each; Trego and Woodson Counties, 2 each; and Coffey, Marion, Sedgwick and Sumner Counties, 1 each. A total of 33 operations reached the completion stage, 1 less than during the preceding week. The 28 oil wells were rated initially at 26,301 barrels, four of the completions were dry holes and 1 was an abandoned location. Included in the 91,594 feet of completed drilling was 6349 feet in 2 wildcat dry holes and 548 feet in 3 old wells.

Wildcat activity in the western part of the state is being continued at the rapid pace established during 1935 when more than 50 new pools were discovered. However, in view of an unusually dry spring evidences of water shortage already are appearing, a situation which may assume serious proportions if lack of precipitation continues during the next two or three weeks.

### New Fields Discovered

Farris, Grattan, Armer and Wakefield's Snyder 1, SE SE NW 3-21s-11w, 5½ miles southwest of the Raymond pool and 22 miles northeast of St. John, gave northeastern Stafford County a new pool when it flowed 226 barrels natural and was estimated making 5,000,000 cubic feet of gas. After being treated with 1000 gallons of acid it responded with a flow of about 18 barrels per hour. Production is reported coming from Lansing lime at 3111 feet.

In the same part of the county Kessler and Their announced the abandonment of Evans 1, NE NE NE 30-21s-11w. This test topped Viola lime at 3525 feet, and cored from 3667 to 3677 feet, the total depth.

Three-quarters of a mile west of the Rickard pool and slightly over a mile south of the Gouldner pool in northwestern Rice County, Empire Oil & Refining Company's Burch 1, SW SE NW 21-18s-9w, had 700 feet of oil in the hole in 17 hours from Arbuckle (Siliceous) lime at 3308 feet and was being drilled ahead.

Farris et al's L. M. White 1, SW SW NW 17-18s-7w, 1¼ miles southwest of the Galt pool in northwestern Rice County, had a small showing of gas from 2867 to 2875 feet and was drilling below 3025 feet. Gulf Oil Corporation (Gypsy) had staked location for Schubert 1, SE SW SE 9-20s-10w, three-quarters of a mile north of production in the Ramond pool in the southwestern part of the county.

In the Gurney pool of western Russell County, Stanolind Oil & Gas Company's Rein 1, NW NW NW 25-14s-14w, was treated with acid and pumped 585 barrels in 24 hours from Oswald lime drilled to 3008 feet. It is on the east side of the pool. Due to the better results from greater penetration in the Sullivan pool Hartman and Blair had deepened Sullivan 1, NE NE SE 2-14s-15w, discovery well, from 3070 to 3085 feet. A nice increase in production was indicated but a new gauge had not been reported. When completed in February, 1935, the well made 220 barrels natural from Oswald lime pay from 3060 to 3070 feet.

Morgan and Flynn's Zimmer 1, SE SE SW 20-19s-14w, southwestern Barton County wildcat test, encountered a hole full of water in Kansas City lime at 3310 feet and had run a string of 6⅝-inch for a shut off. It will be drilled to Arbuckle (Siliceous) lime. In the two-county Silica pool, Mid-Continent Petroleum Corporation's Schmidt 4, SE NE SW 36-19s-11w, topped Arbuckle (Siliceous) lime at 3274 feet and showed only slight saturation in the first two feet of penetration.

The Wherry pool in the southeastern part of Rice County was given a southward extension during the week when Douglas et al's Hauschild 1, NE NE NW 15-21s-7w, flowed 624 barrels in 24 hours from one foot of Mississippi chat topped at 3369 feet. The pool was discovered in September, 1933, the discovery well yielding 480 barrels on the swab from Mississippi chat at 3360 to 3380 feet. Hauschild 1 probably will be deepened.

The Russell pool in the western part of the county was given a three-quarters of a mile southwest extension early in the week when Hartman and Blair's Dan Boxberger 1, NE NE NW 33-13s-14w, encountered Arbuckle (Siliceous) lime at 3286 feet and started filling up at the rate of about 2000 feet an hour. Since the hole was caving lowering of the 6⅝-inch casing from 3228 feet was immediately commenced. Total depth is 3291 feet. Shell Petroleum Corporation's Brown 1, NE NE SW 31-13s-14w, and Empire Oil & Refining Company's Peter Boxberger 1, SW SW NW 32-13s-14w, are new operations in the area.

Two locations north of established production in the Sullivan pool, Wolf Creek Oil Company was lowering 6⅝-inch casing to shut off water found in Oswald lime at 3160 feet in Dillner 1, SW SW SW 36-15s-13w. It is reported as running low and may define the productive limit in that direction.

Deal Oil & Gas Company's Marrs 1, Lot 11, Block 35, SE¼ 11-32s-2e, three blocks west of Main Street in the Oxford Town-

## KANSAS
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **BARTON COUNTY—** | | |
| Texas, Moran 1, se se sw 25-17s-11w | 1223 | 3285 |
| Continental, Risse 5, se sw se 36-19s-11w | 1816 | 3297 |
| Mid-Continent, Schmidt 3, ne se sw 36-19s-11w | 1255 | 3288 |
| Phillips Pet., Matzek 2, nw nw ne 36-19s-11w | 2014 | 3298 |
| Magnolia Pet., Steckel 2, nw ne nw 1-20s-11w | 1250 | 3296 |
| **BUTLER COUNTY—** | | |
| Vickers Pet., McCramer "E" 1, cwl sw se 35-24s-3e | 125 | 2726 |
| Polhamus, Semisch 3, nw ne ne 5-28s-7e (pb 2777) | 75 | 2784 |
| **ELLIS COUNTY—** | | |
| Twin Drlg., Sanders 1, ne ne nw 10-14s-17w | * | 3626 |
| Gibson et al, Ruder 2, nw sw se 8-15s-18w | 866 | 3516 |
| **ELLSWORTH COUNTY—** | | |
| Carter et al, Ogden 3, csw 26-17s-9w | 1596 | 3166 |
| Carter et al, Teubner 5, cnl nw 26-17s-9w | 1250 | 3182 |
| **GREENWOOD COUNTY—** | | |
| Shaffer & Howell, Souder 4, cs½ ne se 16-23s-13e | 25 | 1756 |
| Wenzel, Cross 1, ne se ne 12-27s-10e | 30 | 1907 |
| **MARION COUNTY—** | | |
| Milton et al, Young 1, nw nw se 17-21s-3e | * | 3088 |
| **RENO COUNTY—** | | |
| Olson & Shell, Johnson 3, cse nw 24-23s-4w | ¶1-224 | 3370 |
| **RICE COUNTY—** | | |
| Empire O&G, Janssen 1, ne ne nw 3-18s-8w | 956 | 3282 |
| Shell et al, Ploog 9, ne nw se 33-18s-9w (otd 3243) | 748 | 3248 |
| Gulf Oil, Steckel 8, se ne nw 31-19s-10w (pb 3295) | 1088 | 3296 |
| Bradley Oil, Wendell 4, se ne ne 32-19s-10w | 1744 | 3297 |
| Gulf Oil, Wendell 2, ne nw se 32-19s-10w | 1584 | 3320 |
| Stanolind O&G, Mitchell 4, nw ne sw 32-19s-10w | 977 | 3331 |
| Gulf Oil, Kessling 3, se sw sw 10-20s-9w | 667 | 3234 |
| Stanolind, Smith 2, nw ne se 16-20s-9w | 2173 | 3258 |
| **RUSSELL COUNTY—** | | |
| Texas, Gurney 2, nw sw ne 23-14s-14w (pb 3155) | 240 | 3241 |
| Hartman & Blair, Johnston 1, nw nw nw 11-13s-14w | lcn. | abd. |
| Empire et al, Major 1, se se se 11-14s-12w | * | 3261 |
| Crown Pet., Krug 1, ne nw nw 26-14s-14w | 485 | 3040 |
| Billings, Witt 24, se se sw 3-14s-15w | 225 | 3318 |
| Bridgeport, Polcyn 7, nw nw ne 10-14s-15w (otd 3105) | 1050 | 3285 |
| **SUMNER COUNTY—** | | |
| Shell Pet., Mason 4, sw se nw 25-31s-2e (otd 1900) | * | 2263 |
| Stelbar, Barlow 2, se sw ne 33-31s-1w | 1045 | 3680 |
| Deal O&G, Town Lot Fee 1, nw sw se se 11-32s-2e | 628 | 3051 |
| Shell Pet., Emerich 16, nw nw se 14-32s-2e | 942 | 2852 |

*Failures; †Junked; ¶Million cu. ft. gas.

site pool of eastern Sumner County, was completed for 1060 barrels in Simpson formation drilled to 3125 feet. Outside of the townsite Shell Petroleum Corporation had reacidized Scroggins 3-A, CEL SE NW 14-32s-2e, and completed for 740 barrels at 2884 feet. It was an old well originally completed in Stalnaker sand at 2076 feet several years ago.

**Trego County**

Continental Oil Company's Holcomb 1, C E½ NW 26-11s-23w, new discovery well in the Wakeeney area of northern Trego County, yielded 439 barrels of oil in 23 hours after being acid treated. Production is from Lansing-Kansas City Group, drilled to 3603 feet.

J. R. Lebosquet and Kansas Oil & Gas Corporation have announced location for Penny-Wann 1, SE SE SE 13-15s-20w, 17 miles southwest of Hays and nine miles west of production in the Ruder (Schoenchen) pool in southwestern Ellis County. The deal was made on a farm-out arrangement with Stanolind Oil & Gas Company from which the operators obtained the 80-acre drilling tract and nine other 80-acre tracts in the large Stanolind block. The new location is 1¼ miles south of Stanolind Oil & Gas Company's Penny-Wann 1, NW SW SE 12-15s-20w, which had a showing of oil in Kansas City lime at 1480 feet, encountered granite at 3711 feet and was abandoned at 3716 feet in July, 1935. Drilling is due to start by May 15 and will be done with rotary tools to top of the Kansas City lime and with cable tools below that point. The Penny-Wann ranch is one of the largest in Kansas.

## WINKLER COUNTY

### Keystone west flank flows 412 barrels

**Midland, Texas.**—The sandy-lime horizon on the west flank of the Keystone field, Winkler County, registered a 412-barrel flowing well when Continental Oil Company's J. B. Walton 1, SEc NE Section 8, Block B-3, PSL Survey, responded to shot at 3410 feet. First oil saturation was logged at 3361-60 feet. The hole was shot with 215 quarts of nitro at 3275-3401 feet. This well is a north offset to Sun Oil Comany's Walton 1, which produces its proration allowable of 100 barrels daily through 19/64-inch choke. It is also making about seven barrels of salt water daily. Both wells are relatively low on structure when compared with oil wells producing from the dolomite lime in the Keystone field, and yield oil from a horizon that carries a heavy flow of dry gas in the latter field.

Magnolia Petroleum Company's State-Walton 1, located slightly more than one mile west of the above sandy-lime producers, responded to treatment with 3000 gallons of acid at 3500 feet with a flow of 62 barrels of oil and 76 barrels of water during the first hour. However, the oil was mostly the load used in connection with the acid treatment and the unusually large volume of fluid for the single-hour gauge was due to the revival of gas passed up in drilling to 3695 feet.

# *Wildcat Fails*

## IMPORTANT GLASSCOCK TEST DRILLS INTO WATER SAND

NORTH & WEST TEXAS

WEEKLY STAFF REPORT

**San Angelo.**—Aggressive lease buying waged in north central Glasscock County in general vicinity of Fleetborn Oil Corporation and Mid-Continent Petroleum Corporation's F. C. Dodson 1, SEc Section 13, Block 34, T&P Ry. Survey, T-3-S, was abruptly terminated middle last week when the wildcat drilled into sulphur water at 2795-2812 feet. Registering a high structural position through having topped the brown lime at 2332 feet, or 382 feet above sea level, this wildcat logged oil showings above and below the lime marker. It is about 8 miles southeast of the World pool, nearest producing area.

Numerous oil and gas showings logged by Dodson 1 add to the prospects for a producer being eventually found by a more favorably situated test on the pronounced geological feature. Majors competed with independents in corralling all available acreage, and Shell Petroleum Corporation contracted to start a 3100-foot test within 90 days as part consideration for lease on about 4800 acres out of the L. S. McDowell ranch. Location will likely be in the south 320-acres of Section 41, Block 34, T&P Ry. Survey, T-2-S.

Northwestern Reagan County is to receive another wildcat test through the efforts of F. Oyster, R. R. Rhodes and E. R. Bahan, all of Abilene, and location has been made for M. H. Chase 1, C NE¼ Section 40, Block 36, T&P Ry. Survey, T-5-S. It is about four miles southwest of their Reed 1, which was abandoned last December at 3566 feet.

Extension of production in the Means field, Andrews County, about 1½ miles to the northwest assumed a promising aspect the past week when Humble Oil & Refining Company's J. M. Spinks 1, near C SW SE Section 13, Block A-20, PSL Survey, cored oil saturated lime at 4514-4521 feet. Operations were halted to cement 7-inch pipe at 4250 feet. Spinks 1 logged first saturation at 1349 feet subsea. Humble Oil & Refining Company's R. M. Means 6, near C NW NW Section 4, Block C-45, the nearest producer, logged oil pay at 4520-4555 feet, with the hole bottomed at 1376 feet sub-sea. R. M. Means 7, near C SE SE Section 15, Block A-20, is a new location, and is a west offset to production.

Payment of $15 per acre cash bonus for leases centering near the northeast corner of Block A-25, PSL Survey, Gaines County, has been reported lately. Reports indicate that a wildcat test will be started shortly in the immediate area. Landreth Production Corporation's W. H. Kirk 1, SWc Section 22, Block A-21, PSL Survey, was drilling below 1600 feet late last week. It is located about 10 miles south by east of the above active trading area.

An Ordovician lime test in northeastern Terrell County is reported to be contemplated by Marathon Oil Company. The company is now engaged in surveying its large block of leases surrounding M. H. Goode 1, SW SE Section 26, Block 161, GC&SF Ry. Survey, which was originally completed by the Trans-continental Oil Company in 1931 as a small gasser at 6120 feet. This wildcat has remained shut in, except for periodical gauge. The land survey is being conducted by Marathon Oil Company to ferret out all possible vacancies, as the company has had considerable experience and expense with excess acreage in its discovery leasehold in the Yates area. Contract covering leases surrounding the Goode gas well will expire in the near future.

Open tubing gauge given R. H. Henderson et al's J. B. Walton-Humble 1-A, Winkler County semi-wildcat reported last week as having developed a heavy flow of oil from Hendrick field lime zone at 3034-3049 feet, amounted to 2306 barrels of oil daily. On preliminary gauge the well is credited with having produced at rate of about 400 barrels per hour through open casing. It later encountered trouble with loose sand, and is also making an undetermined amount of basic sediment. The same operators Walton-Humble 1-B swabs six barrels hourly from lime at 3045 feet after nitro shot.

Gulf Oil Corporation's Daugherty 1-A, SEc SW¼ Section 35, Block 74, situated ½ mile west of production in the north portion of the Sayre field, earned a proration potential of 25 barrels of 30.6 gravity oil after nitro shot at 2920-3055 feet. It was plugged back from sulphur water in lime at 3414 feet to 3068 feet, and is structurally low, having topped the lime marker at 2734 feet or 135 feet above sea level. The gravity of the oil is also lower than that produced in the Sayre field proper. Magnolia Petroleum Company is rigging up to drill State-Walton 2, NWc Section 5, Block B-3, about one mile east of production in the Sayre field. This company's State-Walton 1, wildcat between Sayre and Keystone fields, will likely be abandoned, as it failed to respond to acid treatment after plugging back from 3695 feet to 3645 feet. Another test is to be made at 3600 feet.

Sun Oil Company's Keystone 1, located between Keystone and Scarborough fields, was plugged at 4043 feet in salt water formation.

Illinois Oil Company's Walton-Abi-

lene Bank 1, SEc SW¼ Section 23, Block 26, PSL Survey, was drilling near the 2900-foot level late last week, having passed up 8 million cubic feet of dry gas production in the upper lime. This test is a semi-wildcat, situated about 1¼ miles east of production in the Hendrick field and 1½ miles due south of the Sayre field. In southeastern Winkler County, Reed and Duffy have made location for a wildcat on John Sealy Estate's ranch, NWc Section 8, Block "A", GMMB&A Survey. The drilling block includes acreage obtained last October by Hal C. Peck et al, who contracted to drill a 4000-foot test in part consideration for lease on 5120 acres.

In northwestern Loving County, Porter Rankin et al's W. D. Johnston 1, SWc SE NW Section 12, Block 57, T&P Ry. Survey, situated in an area that has heretofore received a number of tests on the strength of nominal oil showings, is reported to have a good oil showing in Deleware at 3176 feet. Top of Deleware lime was logged at 3119 feet, and sand at 3151 feet, with an elevation of 2904 feet.

A nitro shot will be necessary to determine if it will make a commercial producer.

---

**T. R. CLINE**, O. F. Scheauble, and C. Davenport, all of the drilling staff of Standard Oil Company of Venezuela, Quirequire district, arrived in New York April 9 on the S.S. Southern Cross, for vacations in the United States.


*Sometimes—*

**You can't see the forest for the trees.**

IN OTHER WORDS, you're so close to your own business that sometimes you can't get a good clear picture of it. You need help to get the right focus. *That's where the National Bank of Tulsa enters the picture.*

Its officers have had a part in making so many loans for so many different purposes that they can spot the strong and weak points in your financial plans, probably better than even you can. Their advice may mean the difference between failure and success.

The officers of the National Bank of Tulsa hold to the principle that a good bank loan must benefit the borrower, the depositors, and the bank.

They want you to do business with them.

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

**NATIONAL BANK OF TULSA**

TULSA, OKLAHOMA

*The Oil Bank of America*


## PANHANDLE SALE

### Pure Oil withdraws as Panhandle producer

**Pampa, Texas.**—Pure Oil Company has withdrawn as a producing unit in the Texas Panhandle through the sale of its properties in Gray and Hutchinson Counties to Roy B. Jones, Wichita Falls, and associates for a cash consideration of $110,000. Jones is president of Panhandle Refining Company, a pioneer operator in the Panhandle.

The deal involves three leases, embracing 440 acres with 16 pumping wells rated at 275 barrels daily potential and a current allowable of 150 barrels daily. These properties are credited with having produced 1,300,000 barrels of crude.

Daily market for approximately 5,000,000 cubic feet of sour gas residue from Shamrock Oil & Gas Company's natural gasoline extraction plant in the Sunray field, Moore County, will be provided by the Illinois Zinc Company's proposed zinc smeltering plant to be erected in the field.

## WEST TEXAS Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ANDREWS COUNTY (Deep Rock Field)— | | |
| J. W. Tripplehorn et al, A. R. King 2 | 287 | 4382 |
| CRANE COUNTY (McElroy Field)— | | |
| Gulf, J. T. McElroy 131 | 548 | 2900 |
| ECTOR COUNTY (N. Cowden Field)— | | |
| Conoco, TP Land Trust 4-A | 563 | 4265 |
| Empire O. & R. Co., Wight 4 | 1170 | 4296 |
| Tide Water, A. W. Wight 1 | 756 | 4303 |
| ECTOR COUNTY (Goldsmith Field)— | | |
| Phillips Pet. Co.-Pure Oil Co., C. Cowden 4 | 2300 | 4192 |
| CROCKETT COUNTY (Wildcat)— | | |
| Dr. J. G. Harris et al, O. W. Parker 1 | * | 2016 |
| FISHER COUNTY— | | |
| Roeser-Pendleton, Inc., M. E. Herring 1-B | 500 | 3124 |
| GARZA COUNTY— | | |
| M. L. Richards et al, Post 1 | 93 | 2823 |
| HOWARD COUNTY— | | |
| American-Maracaibo Co., Settles 7-A | 1175 | 2419 |
| Sinclair Prairie, Dodge 33 | 745 | 2820 |
| JONES COUNTY— | | |
| Thos. D. Humphrey et al, A. A. McDuff 1 | * | 2609 |
| N. H. Martin & Son, H. Dorsey 1-C | 150 | 2161 |
| PECOS COUNTY (Wildcat)— | | |
| Trans-Texas Oil Co., C. M. Caldwell 1 | * | 5326 |
| UPTON COUNTY (McCamey Field)— | | |
| Black & Case (was Perry-Breeding), Lane 3 | 327 | 2339 |
| J. W. Ellis, Tr., J. W. Robbins 2-A | 624 | 2080 |
| Gulf Oil Corp., J. H. Shirk 3 | 700 | 2343 |
| WARD COUNTY— | | |
| California Co., L. A. Adams 1 | 1504 | 2570 |
| Hal C. Peck et al, J. S. Reynolds 1. | * | 2426 |
| Richardson Oil, Inc., Johnston-Sun 29-B | 215 | 2570 |
| WINKLER COUNTY (Wildcat)— | | |
| Crandall, Osmond & J. C. Maxwell, Walton-State 1 | * | 3245 |
| Sun Oil Co., Keystone 1 | * | 4043 |
| WINKLER COUNTY (Brown-Altman Field)— | | |
| Barnsdall Oil Co., Brown-Altman 2-A | 65 | 3171 |
| WINKLER COUNTY (Gulf-O'Brien Field)— | | |
| Magnolia, J. Sealy 3 | 252 | 3134 |
| WINKLER COUNTY (Halley Field)— | | |
| Skelly Oil Co., S. M. Halley 7 | 410 | 2910 |
| WINKLER COUNTY (Hendrick Field)— | | |
| R. H. Henderson-Uscan Oil Co., Walton-Humble 1-A | 2306 | 3049 |
| WINKLER COUNTY (Keystone Field)— | | |
| Sinclair-Prairie, J. B. Walton 1 | 30 | 3500 |
| WINKLER COUNTY (Sayre Field)— | | |
| Mid-Continent Pet. Corp., Howe 5-A | 1320 | 3010 |
| Sinclair Prairie, Cummins 1-B | 440 | 2985 |
| YOAKUM COUNTY (Wildcat)— | | |
| Honolulu Oil Corp.-Cascade Pet. Co., L. P. Bennett 1 | 234 | 5278 |

*Failures; †Junked; ¶Million cu. ft. gas.

The latter is to take advantage of the cheap residue gas fuel and smelter zinc ore obtained in New Mexico, and the product will be forwarded by rail to the company's refining plant at Peru, Illinois.

Phillips Petroleum Company's G. W. Porter 1, C NE SW Section 35, Block A-8, H&GN Ry. Survey, Wheeler County wildcat seeking production in the Ordovician lime series, was logging granite wash formation while drilling below 3100 feet late last week. Dolomite lime at 2990 feet showed salt water.

## KNOX EXTENDED

### Acid help to half-mile northwest outpost

**Wichita Falls.**—Lime horizon in the Knox field, Young County, was extended about one-half mile to the northwest when Geo. B. Ray and Staniforth's Wooten et al 1, SEc Section 1976, TE&L Company Survey, responded to acid treatment with a flow of 30 barrels of oil during the first 30 minutes, and 52 barrels the next one-half hour. Further testing was deferred for lack of storage. This extension well was treated with 3000 gallons of acid solution in lime at 3940-3960 feet. It was rated at 100 barrels daily prior to treatment.

In Grayson County, Olson Drilling Company and James H. Gardner et al's Southwestern Life 1, Ordovician lime test for the Preston Anticline, was logging shale and lime formation in drilling at 5700 feet. Tendency of the hole to cave has slowed down drilling progress. Twistoff of drill pipe at 5656 feet threatened a major fishing job, but the owners were successful in recovering the section lost about 900 feet below surface. In Cooke County, Sunray Oil Company et al's A. C. McCall 1-A, located near Red River, was drilling below 4170 feet, although originally contracted to go to 4000 feet.

Alma Oil Company's T. B. Yarbrough 1, northeastern Cottle County wildcat, has apparently missed its objective, the Canyon lime horizon, and was drilling near the 5800-foot level late last week. It is about seven miles west by south of the same company's Mollie Low 1, which yielded a small amount of high gravity oil with water from Canyon at 5633-5653 feet, then abandoned after deepening to 8223 feet last year.

## TEXAS PANHANDLE
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| GRAY COUNTY— | | |
| Claude Drl. Co., E. A. Gorenflo 1 | 744 | 3280 |
| Empire Oil & Ref. Co., Walberg-Hood 2 | 523 | 3034 |
| Hagy-Harrington-Marsh, H. W. Fields 1 | ¶35.1 | 2699 |
| S. J. Iverson et al, McKinney-Barrett 1 | 684 | 3276 |
| Kewanee O&G Co., Smith-Rest 19 | 577 | 3250 |
| Magnolia, Ray Harrah 12 | 281 | 3230 |
| Cy Rieger et al, Combs-Worley-Conoco 1 | 20 | 3060 |
| Saulsbury Oil Co., E. R. Husted 1 | ¶15¾ | 2863 |
| HUTCHINSON COUNTY— | | |
| Holmes & Newblock, Moore 3 | 659 | 3100 |
| WHEELER COUNTY— | | |
| Rogers et al, T. Timberlake 1 | * | 4057 |
| Royal O&G Corp., Keller 28 | 2242 | 2548 |

*Failures; †Junked; ¶Million cu. ft. gas.

## DEEP TEST SHOWS

**Ranger, Texas.**—Heavy gas yield indicated by Seaboard Oil Corporation's Julia Dawson 1, second test on the company's 11,000-acre geophysical prospect in northwestern Hamilton County, has been passed up to test the Ellenberger limestone horizon. Dawson 1, located 1000 feet out of the southwest corner of BBB&C Ry. Survey No. 41, and 3500 feet north by east of the discovery gasser, was drilling below 2650 feet, according to late reports, after showing for a big gasser when formation tester was used in Marble Falls lime at 2523-2568 feet. Tester was only opened for 30 seconds, and within that period satisfied those in charge that the well was capable of a big gas yield. T. K. Rea 1, the first producer in the county, was completed last March at 2455 feet rated at 11,690,000 feet of dry gas, with most of the gas formation cased off. It was drilled with cable tools, and casing difficulties caused the company to abandon plans to deepen the Ellenberger. The new test is about 60 feet lower on structure.

## TEXAS PERMITS UP

**Austin.**—Permits for the drilling of 374 new wells were approved by the Railroad Commission last week. Approval of 104 permits for wells in East Texas accounted for most of this increase, although the Gulf Coast also became much more active.

In East Texas there were 48 permits for wells in Gregg County, 34 in Rusk County, 17 in Upshur County, three in Cherokee County, and two in Smith County.

The Gulf Coast reported 73 new locations, which included 22 in Nueces County, 10 in Chambers County, and nine in Harris County. Southwest Texas operators filed 67 locations, including 33 in Duval County and 15 in Webb County.

East Central Texas reported 28 permits, including eight in Titus County. West Central Texas had 25 locations, with 11 in Shackelford County. North Texas reported 26 permits, including 11 in Wichita County.

West Texas reported 30 scattered locations, and there were 21 in the Panhandle, which included 10 in Gray County.

## POSTPONE HEARING

**Austin.**—The Texas Railroad Commission has postponed until April 28, the hearing on the Clarkwood field which was scheduled to follow the statewide proration hearing.

Earlier last week the Commission had ordered wells in the Corpus Christi field to reduce allowables from 150 to 100 barrels per day, effective April 14.

At the statewide hearing a conference on this problem resulted in the restoration of the allowable effective April 16, the day of the hearing. The Commission insisted, however, that operators would be allowed only 100 barrels per well per day for the two day period in which the order was effective.

When the cut was ordered the Commission stated that its purpose was to conserve the reservoir energy. The order stated that in March tests had shown that the average gas-oil ratio in the field was 3000/1. Tests in April, however, indicated that this average had risen to 15,000/1.

A hearing which had been scheduled for Corpus Christi on May 7 was cancelled by the Commission after the restoration of the allowable was announced.

## NORTH TEXAS
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ARCHER COUNTY— | | |
| L. T. Burns et al, McCrory 3-Y, sec 121 | * | 626 |
| Cable Oil Co., Webb 9 | 20 | 701 |
| C. B. Christie et al, L. F. Wilson 1, sec 1 | 168 | 1612 |
| Barney Cockburn, Andrews 12, sec 2437 | 35 | 1398 |
| Fain-McGaha Oil Corp., Morrison 7, sec 1580 | 25 | 1331 |
| Hamilton Pet. Co., Abercrombie 31 | 25 | 1163 |
| Abercrombie 33 | 50 | 1191 |
| A. J. Ikard 12 | 80 | 1150 |
| Arthur Holston et al, T. J. Dempsey 1, blk 10 | * | 1202 |
| Huggins Oil Co., Ford 12 | 10 | 1004 |
| Kimbell & Bohner, J. D. Carpenter 5, sec 89 | 60 | 1064 |
| C. B. Long et al, J. H. Turbeville 1-A, blk 155 | * | 1567 |
| Seaberry et al, Parrish 1, sec 110 | * | 1515 |
| T. O. Shappell et al, P. A. Carr 1, sec 7 | * | 1316 |
| The Texas Co., T. A. Mathews 1, blk 137 | * | 1452 |
| Vital Oil Co., J. L. Anderson 1, blk 18 | 50 | 1425 |
| BAYLOR COUNTY— | | |
| Hardgrave & McCulloch, L. Horncink 1, sec 5 | * | 300 |
| Geo. B. Ray-Staniforth, Portwood 44-C, sec 1574 | 250 | 1359 |
| COOKE COUNTY— | | |
| Harrison & Dillard, R. W. Trew 3 | 150 | 1234 |
| Hudspeth et al, Truebenbach 4-B | 70 | 937 |
| Mills & Carey, F. M. Beznor 1 | † | 700 |
| JACK COUNTY— | | |
| Buttram Pet. Co., Cullers-Sporer 4 | 25 | 2095 |
| Clark et al, L. S. Wright 1 | 15 | 770 |
| G. M. Gillespie et al, B. F. Rankin 1 | 500 | 2975 |
| Geo. B. Ray-Staniforth, L. J. Hester 1 | † | 2116 |
| Wright & Lester, M. N. Brown 1 | * | 425 |
| Martin Yell et al, Branum-Bloodworth 2 | * | 304 |
| MONTAGUE COUNTY— | | |
| Roy I. Carter et al, R. W. Cunningham 18 | 10 | 925 |
| Conoco, C. A. Dodgin 2 | 168 | 1781 |
| The Texas Co., Cunningham 9-A | 44 | 940 |
| WICHITA COUNTY— | | |
| Bourbon Roy. Co., J. A. Watkins 3, blk 46 | 2 | 464 |
| Douglas Prod. Co., Douglas-Humble 20-E, sec 11 | 5 | 924 |
| Arthur Holston et al, J. L. Jackson 1, sec 14 | 6 | 714 |
| Tom Hunter-C. A. Everts, S. P. Gibson 1, blk 301 | * | 2142 |
| The Texas Co., Honaker 73 | 30 | 1064 |
| Waggoner Est. 424, blk 148 | 68 | 1111 |
| WILBARGER COUNTY— | | |
| Fain-McGaha Oil Corp., Waggoner Est. 7-Y, sec 43 | † | 2425 |
| Hamilton Pet. Co. et al, Waggoner 1-B, sec 65 | * | 1569 |
| YOUNG COUNTY— | | |
| L. T. Burns et al, R. Campbell-Conoco 4-A, sec 1484 | * | 1258 |
| Cato Oil Co., G. B. Hamilton 9, sec 1393 | 30 | 914 |
| Duncan et al, Benson 6, sec 1391 | 89 | 912 |
| Benson 7, sec 1391 | * | 932 |
| W. F. Hamilton et al, Jeffery-Maer 11, sec 53 | 60 | 844 |
| Jack Harris et al, J. Newman 1, sec 2 | * | 542 |
| L. V. Hull et al, A. B. Street 1, sec 303 | * | 1302 |
| C. E. Knox et al, Worsham 1, sec 3412 | 128 | 2688 |
| Kriss & Alexander, Belknap 2, sec 23 | * | 732 |
| Solo Oil Co. O. B. Stowe 6, sec 2 | 150 | 1066 |

*Failures, †Junked; ¶Million cu. ft. gas.

# *Sixty Cent Crude*

## LOW PRICE ON TALCO OIL TO RETARD DEVELOPMENT

WEEKLY STAFF REPORT

**Tyler, Texas.**—Crude produced in the Talco area, situated in northwestern Titus and eastern Franklin Counties, has been given a flat price schedule of 60 cents per barrel effective April 15 by Humble Oil & Refining Company in connection with the operation of its six-car capacity loading rack on the Paris & Mount Pleasant Railroad.

Approximately 2½ miles of 4-inch line has been built from the rack to connect with the company's flowing producer in Franklin County and an allowable of 150 barrels daily per well has been assigned to the area by the Railroad Commission.

The oil tests about 26 gravity, and is classed as a mixed base crude.

The comparatively low price posting is identical to that received by Pleasant Oil, Incorporated, in making a spot sale of 10 cars from its discovery well to a refinery near Houston for a test run.

Independents have threatened for several weeks to launch an active drilling program on acreage held under lease between the two producers, which are about 2½ miles apart and adjacent to the Mexia fault plane. The Texas Railroad Commission has approved permits for about 30 locations staked by independents, including a dozen or more on town lots at Talco, but the permit holders have hesitated in carrying out development plans.

Posting of a 60-cent price schedule is expected to retard developments, as the cost of completing wells in the Paluxy sand, or upper Trinity series near the 4200-foot level is estimated at $25,000. This particular section of the Trinity has never produced oil heretofore in Texas, so the probable recovery per acre is highly speculative.

Magnolia Petroleum Company began work on its first test for the Talco area last week, having made location for C. M. Carr 1, located 580 feet from the north and 158½ feet from east lines of a 70-acre lease, M. V. Delgado Survey. It is a west offset to the discovery well. E. N. Wilson, district superintendent for the company in the East Texas field, moved in a company-owned rotary early last week to drill Carr 1. This test is the only active operation on a direct line between the producers.

Three probable failures reported last week as having been drilled immediately north and some distance south of the fault plane remained unchanged. Humble Oil & Refining Company's M. B. Groves 1, which missed the Paluxy zone through having failed to cut through to the upthrow side of the fault after drilling to 4492 feet, or 4183 feet sub sea, has been shut down indefinitely with 8⅝-inch pipe cemented at 4475 feet. Operations are underway on Groves 2, located in the south portion of the 82.9-acre lease, and the company's Myra Galt 1, NWc of 80-acre lease, R. I. Winn Survey, was drilling below 3600 feet.

Plugging orders have been issued for John T. O'Neal and C. M. (Dad) Joiner's O. C. Lilienstern 1, SEc of 80-acre lease, Wm. Gann Survey, situated about 22,000 feet southeast of the discovery well. It failed to show for a producer in the Paluxy sand series at 4360-4496 feet. Jules Alford et al's J. E. Fry 1, located on 120-acre lease, Isaac P. Stern Survey, and about 9000 feet due south of the discovery producer, developed a fishing job near the 4300-foot level. It is considered too far south of the fault plane to produce and occupies a low structural position.

In Lamar County, J. A. Forrester et al's J. F. Woodward 1, located 1½ miles east by south of Minter, was idle late last week with the hole bottomed at 4273 feet in shale and thin streaks of sand. It has reached the equivalent of the upper pay in the Rodessa field, according to reports. Base of solid massive anhydrite was logged at 4075 feet, with broken anhydrite continuing to 4105 feet, with an elevation of 402 feet. This wildcat showed a trace of gas in Paluxy zone at 3060-3144 feet.

Pure Oil Company's W. H. Faulkner 1, projected Trinity sand test near Mount Enterprise, Rusk County, is credited with having cut through the fault plane to the upthrow side in logging Pecan chalk at 2650-2890 feet, an unusually thin section for the area. First broken Austin chalk was logged at 3286 feet and hard chalk at 3321 feet, with an elevation of 563 feet. The fault plane in this area extends generally in an east and west direction. The drilling block covers about 12,000 acres along the fault trend.

C. F. Lytle et al's J. Thompson 1-T, situated on the west edge of Mexia field, was coring oolitic lime, carrying oil saturation, near the 5670-foot level. Owners are preparing to make a test for production near this level, as previous attempts to develop production from the Trinity horizon in the area drilled into water before giving the probable producing zone a decisive production test.

# *Drilling Increases*

## MANY EAST TEXAS PERMITS SWELL FIELD'S ACTIVITY

**Tyler.**—Volume of drilling activity in the East Texas field scored a sharp gain following recent approval by the commission of a large batch of well permits involving exceptions to the spacing rule. Report covering current field operations indicates about 135 rigs in service, besides 95 locations, derricks and rigs on the come up list. The field accounted for 62 completions the past week, including 57 producers, four failures and a junked test. This compares with a total of 65 completions the previous week.

Independents were credited with 42 of the completions reported the past week, and 14 of their total failed to flow and are scheduled to be pumped, else equip with air or gas lifts. Two non-flowing wells were completed by Magnolia Petroleum Company on east edge leases. This company's R. H. Still 2 showed for a small pumper at 3562 feet, and will be shot with 30 quarts of nitro to try and increase the fluid level. Its W. L. Fuller 3, located in north Gregg County, pumped four barrels hourly on initial test from broken pay at 3668-3689 feet.

Upshur County added two failures and a junked test. C. W. Boller and P. F. Rutledge's P. Todd 2, located on west end of 155-acre lease, P. Whetstone Survey, lost tools while drilling in with machine in sand at 3705-3706 feet, with an elevation of 403 feet, and has skidded rig. Stanolind Oil & Gas Company and The Falcon Company's Carl Everetts 1-E, Wm. Goodwin Survey, failed to encounter oil sand at the normal depth, and showed heavy head of salt water when formation tester was used at 3614-3647 feet. The hole was drilled to 3345 feet sub-sea. E. C. Johnston, Longview, et al's J. W. Moore 1, SEc 15-acre lease, J. King Survey, and west offset to a small producer, entered the Woodbine at 3727 feet, or 3361 feet below sea level, and was abandoned at 3762 feet.

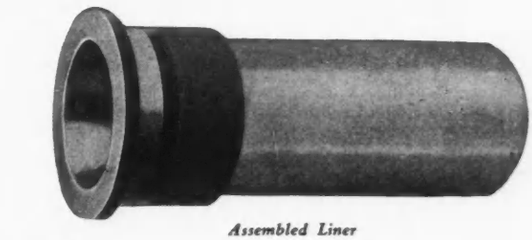
### EAST TEXAS Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| JOINER AREA— | | |
| American Trad. & Prod. Corp., Cook-Colonial 10 (40-ac) | 9000 | 3716 |
| Arcadia Ref. Co.-L. K. Salsbury, Salem School 1 (5¼-ac) | 480 | 3745 |
| Atlantic O. P. Co., Kinney 39 (336-ac) | 2500 | 3637 |
| R. H. Dearing & Son, Finney 7 (40-ac) | 500 | 3675 |
| Denco Oil Corp.-C. D. Judd, Frederick 1 (11.34-ac) | 90 | 3612 |
| Humble, R. E. L. Silvey 7-C (58.02-ac) | 6800 | 3765 |

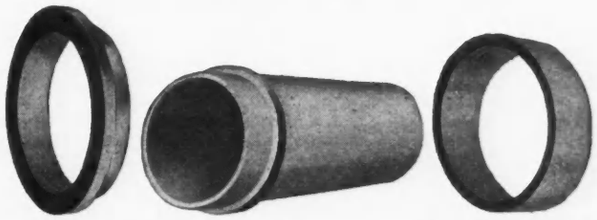
| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| Alex McCutchin et al, A. S. Jarvis 5 (85.8-ac) | 500 | 3749 |
| Magnolia, A. J. Deason 6 (19.72-ac) | 5400 | 3709 |
| T. W. Medlin et al, Mayfield 5 (82.91-ac) | 4000 | 3820 |
| Retsal Drl. Co., H. Coates 1 (55-ac) | 75 | 3597 |
| J. P. Maxwell 24 (23.14-ac) | 75 | 3682 |
| Royal Pet. Corp., Propes 1 (57-ac) | 80 | 3580 |
| A. J. Sanders et al, M. Wilson 1 (21-ac) | * | 3777 |
| A. L. Slaughter & Kugle, Frederick 3 (11.34-ac) | 480 | 3633 |
| Sun, H. A. Pace 31-B (637.45-ac | 2500 | 3805 |
| Texas Canadian Oil Corp., F. A. Keel 2 (63-ac) | 1500 | 3671 |
| F. A. Keel 3 (63-ac) | 150 | 3675 |
| J. W. Pace 8 (48.64-ac) | 5500 | 3791 |
| Tide Water, J. M. Finney 9-A (40-ac) | 3000 | 3707 |
| J. R. Irion 10 (73.55-ac) | 7000 | 3676 |
| KILGORE AREA— | | |
| L. W. Callender et al, W. B. Walker 11 (174.3-ac) | 500 | 3579 |
| Hamilton & Ellis, W. D. Utzman 13 (67-ac) | 750 | 3465 |
| Humble, S. S. Laird 80-B (568.53-ac) | 300 | 3550 |
| Hurtle Oil Co., Henry Sexton 8-B (102.37-ac) | 750 | 3630 |
| Henry Sexton 17-B (102.37-ac) | 700 | 3660 |
| Wm. Sexton 8 (100-ac) | 1000 | 3652 |
| Killam & Solley, H. J. Thomas 1 (1-1/3-ac) | 250 | 3697 |
| Kimberlin & Howse, A. A. King 2-A (10-ac) | 750 | 3464 |
| Kirby Pet. Co., J. Reddic 15 (81-ac) | 1500 | 3747 |
| T. W. Lee & R. H. Williams, Carter 2-A (64-ac) | 1000 | 3586 |
| M. W. McVey et al, S. J. Richards 3 (143.78-ac) | 480 | 3487 |
| Magnolia, R. H. Still 2 (45-ac) | 120 | 3562 |
| Midfield O. & G. Co., E. Samples 4 (14.72-ac) | 1000 | 3732 |
| Natural Pet. Co., J. Henderson 3 (42.72-ac) | 190 | 3615 |
| Producers Inv. Corp. (T. Wynne), Sabine River 1, Tr. 8 | 1400 | 3443 |
| Royal Pet. Corp.-R. H. Dearing, R. M. Leath 1 (5-ac) | 5 | 3578 |
| Sinclair Prairie, S. G. Andrews 23 (200-ac) | 5400 | 3480 |
| Stewart Oil Co., B. C. Redgraves, J. E. Sexton 2 (108-ac) | * | 3657 |
| Sun-Seaboard Oil Corp., M. Strong 7 (50½-ac) | 7600 | 3651 |
| Tide Water, M. G. Barton 27 (194-ac) | 8500 | 3600 |
| Welch-Sandler Oil Co., Barnett-Tidal 11 (107-ac) | 500 | 3706 |
| Marcus Woods et al, T. H. Gill 1 (7.1-ac) | 7000 | 3627 |
| LONGVIEW AREA— | | |
| Arkansas F. O. Co., McKinley 12-B (69.01-ac) | 8000 | 3578 |
| S. G. Smith 9-A (60.15-ac) | 8500 | 3524 |
| L. Y. Tuttle 10 (61.51-ac) | 9000 | 3599 |
| Atlantic O. P. Co., Joe Banda 13 (84.69-ac) | 10,000 | 3675 |
| Jas. Wilson 15 (100-ac) | 9600 | 3600 |
| Ben G. Barnett et al, G. C. Cannon 2 (31.67-ac) | 480 | 3722 |
| Bert Fields et al, E. L. Walker 7 (140-ac) | 2500 | 3693 |
| E. C. Johnston et al, A. Callahan 2 (30-ac) | 240 | 3721 |
| J. W. Moore 1 (15-ac) | * | 3762 |
| L. G. & S. Oil Co., McQueen 8 (94.47-ac) | 3000 | 3575 |
| Joe Long Drl. Co.-Cushing Drl. Corp., Owens 11-A (208-ac) | 2000 | 3576 |
| Magnolia, W. L. Fuller 3 (50-ac) | 96 | 3689 |
| Bobby Manziel et al, C. B. Mackey 4 (119-ac) | 2000 | 3747 |
| B. F. Phillips et al, C. Brooks 5 (18-ac) | 3400 | 3590 |
| P. F. Rutledge-C. W. Boller, P. Todd 2 (155-ac) | † | 3706 |
| Southland Drl. Co.-United E&W Oil Co., O'Byrne 20 (304-ac) | 7300 | 3697 |
| Stanolind, Annie Lee 9 (67.19-ac) | 7200 | 3619 |
| Stanolind-Falcon Co., C. Everetts 1-E | * | 3647 |
| Sun, E. O'Byrne 10 (310-ac) | 1200 | 3741 |
| Tide Water-Stanolind, Flewellen 42-B (374-ac) | 7000 | 3712 |
| ANDERSON COUNTY (Cayuga Field)— | | |
| Stanolind, J. W. Barton 4 (99.12-ac) | 2500 | 4075 |
| VAN ZANDT COUNTY (Van Field)— | | |
| Pure Oil Co., A. G. Maxfield 7 (106-ac) | * | 3056 |
| FALLS COUNTY— | | |
| G. W. Langley et al, A. Springfield 1 | * | 2020 |
| NAVARRO COUNTY— | | |
| W. A. Reiter et al, Dr. T. W. Bounds 1 | * | 3655 |
| E. M. Thomason & Co., Inc., Estes Bros. 1 | * | 2870 |
| HARRISON COUNTY— | | |
| Claude Bagley, Smith 1, J. Womack sur | * | 1065 |

*Failures; †Junked; ¶Million cu. ft. gas.


# THE MacCLATCHIE
## PUMP LINER IS THE LONGEST WEARING LINER ON THE MARKET REGARDLESS OF PRICE



*Assembled Liner*



**GLAND** — *Which Slides on Liner and lasts indefinitely*

**LINER** — *Which is hardened alloy steel ground to a mirror-like finish and economically replaced*

**PACKING RUBBER** — *Highest grade, economically replaced when necessary.*

You can't judge quality by the high prices asked for some Pump Liners. MacClatchie "Money-Saver" Pump Liners are absolutely the highest quality and outwear brands that sell for two to three times as much money.

Users repeatedly tell us that they receive much greater service from pistons when using MacClatchie Liners. You too can economize by standardizing on them.

The MacClatchie "Money-Saver" Pump Liner is made of special alloy seamless tubing milled to our specifications and shipped to us in carload lots. This high grade alloy tubing gives the hardest and smoothest wearing surface and a uniformity of hardness throughout the entire surface of the liner. MacClatchie "Money-Saver" Pump Liners are quickly and economically replaced when worn. The detachable gland—which is subject to no wear and which therefore lasts indefinitely—slips onto the liner instead of being screwed onto it; and the gland co-operates with the integral collar of the liner for clamping the liner in the pump cylinder—a rubber packing ring being mounted on the liner to pack-off between the liner and cylinder wall.

MacClatchie "Money-Saver" Pump Liners are sold by leading Supply Houses.

# MacClatchie
## MANUFACTURING COMPANY

COMPTON, CALIFORNIA — HOUSTON, TEXAS

EXPORT OFFICE: GEO. R. WOODS, 17 BATTERY PL., N. Y. C.

# *One New Field*

## AND 49 NEW PRODUCERS LISTED IN ACTIVE WEEK

WEEKLY STAFF REPORT

**San Antonio.**—Establishment of another county as an oil producer, widening of several fields and completion of long list of oil producers featured a busy South Texas week. There were 49 oil wells, one gasser and 26 failures recorded. New locations, however, exceeded the completed wells.

The week saw a number of disappointments in the way of definition of several proven fields as well as temporary condemnation of a couple of interesting prospects.

Aransas County's Marginulina sand well, which blew out and ran wild for a short time while drill stem test was being made, is the first oil for that county. The well is to be completed as soon as a fishing job is finished. Other Gulf Coast work included extensions to the Corpus Christi field of Nueces County.

Mirando trend has several hot wells in process of completion or near the sand. Loma Novia field and Seven Sisters field, however, were defined in several directions.

Pearsall District, Frio County, is not too encouraging with newest wells showing low initial flows. The field, however, is in the experimental stage and these wells finally may be reworked into good producers. Burleson County's deep Edwards lime test failed to materialize, but did show sufficient to assure the drilling of at least one more well. Guadalupe County's wildcatting holds interest with several wells drilling close to Austin chalk, the expected producing stratum.

In Rio Grande Valley, the second sand at Samfordyce has been definitely established and considerable work is anticipated. Deep work also is holding interest.

Duval County, as usual, led in new completions, there being 15 oil wells and 5 dry holes. The initial flow was 6128 barrels. Nueces County was close behind with 13 producers and 1 failure. The initial flow was higher, totaling 8345 barrels. In Webb County, 6 oil wells were completed along with 1 gasser and 1 failure to place this county in third place. For the entire district, 49 oil wells showed an initial flow of 22,816 barrels. There were 26 failures and 1 gasser.

# *Aransas County*

## McCAMPBELL RANCH TEST MAY BE DISCOVERY WELL

**Corpus Christi.**—Apparent opening of a new field in Aransas County and extensions to several proven districts featured a most active week in the Corpus Christi sector. Likewise, Refugio County regains its light of interest with new locations being staked for a number of deep tests.

Buckingham Oil Company's McCampbell Ranch 1, 2 miles northwest of the town of Aransas Pass in Aransas County and 8 feet from the San Patricio County line, is moving in a new rig to complete in sand at 6534-46 feet where it is showing for a producer. It will be the first field for this county.

The well drilled to 7501 feet and plugged back to 6545 feet to test a sand which showed on an electric formation test. The test was made with a sidewall packer, and the well blew out while the test was being made. It showed considerable oil at the start, but shortly the pressure became so strong that it blew gas with a spray of oil. The flow was through ¼-inch bottom and ⅜-inch top chokes, with the pressure running up to 2250 pounds. Closed in, it showed a pressure of 2750 pounds. The well was killed with mud, but the drill stem stuck. A new rig is being set up to pull the pipe and rework the well. While running out of control, considerable 35.5 gravity oil was produced.

The well, located in Sections 41 and 42 of the McCampbell subdivision of the Orick Survey, has an elevation of 15 feet, derrick floor. It has the Discorbis at 5611-57 feet, Heterostegina at 6144 feet and Marginulina at 6384-6447 feet.

Two east extensions to the Corpus Christi (Saxet Heights) field, Nueces County, were in the making late in the week to bring the field near the limits of that city. R. Y. Walker's Clark et al 1, 1600 feet east of the north end of the field, made a drill stem test in sand at 4061-65 feet which showed 22 fourbles of oil and 25 pounds pressure in 15 minutes. Casing was set and preparations are being made to drill the plugs. Johnson and Skeen's L. Smith 1, Block 10, Brancroft Farms, near Highway 9, and 1600 feet east of the main production of the field, is ready to drill plugs after setting casing on sand at 4062-70 feet. A drill stem test at 4062-70 feet recovered 17 fourbles of pipe line oil with 40 pounds pressure in 15 minutes.

The continuance of a drilling campaign on small tracts is obvious with the number of applications for permits showing further increases. No effort has been made for the unitizing of these drill sites, although some of them are as small as a half acre. Protests and threatened court action in the residential sectors have thus far had no effect on the work.

J. K. Culton and Republic Natural Gas Company's H. B. Baldwin 1-C, deep test southwest of the Saxet Heights field which was abandoned at 7020 feet, is to be reworked and deepened. Derrick is being built. Farther west and south of the Saxet field, A. D. Corgey's H. B. Baldwin 1, northwest corner of Block 21, Russell Farm Lots, has been abandoned at 5006 feet.

Continued success in the 5800-foot sand in the Greta sector and the 4900-foot sand in the Refugio field is attracting considerable drilling. A new campaign is evidenced for the Refugio townsite where the 4900-foot sand area recently was given two extensions. United Production Corporation has staked several locations to match the two rigs already running. More offsets will be required.

Calhoun County saw two important wildcats removed from the active list last week. Continental Oil Company's American National Realty Company 2-A, test having trouble with heaving shale near Seadrift, has been abandoned at 9083 feet. It made a series of tests through perforations between 6925 and 8000 feet, some of which showed a slight bit of gas. Another test is said to be planned in the immediate area in an effort to drill through the shale. Crown Central Petroleum Corporation's M. C. Driscoll 1, seven miles southwest of Port Lavaca, has been abandoned at 7010 feet.

Other than several completions and a deal in the Placedo field of Victoria County, development in that sector of the Gulf Coast was about normal, with several new starts offsetting that number of completions.

American Liberty Oil Company closed a deal for a large portion of the Placedo field, Victoria County, embracing interests in 3330 acres of leases, two 6000-foot producers, two 4700-foot producers, and two active operations. The main transfer was of the Felmont Oil Corporation's half interest in approximately 3225 acres in the Pickering, Buhler and Roos lands, which that concern held jointly with the Barnsdall Oil Corporation. The American Liberty Oil Company also purchased a fourth interest of the Felmont Oil Corporation in 105 acres of the W. R. Smith land. Consideration was not announced, although the cash was report-

ed to be in excess of $100,000, with large oil payment.

In the Plymouth field of San Patricio County, Plymouth Oil Company has completed its 41st consecutive producer in the Plymouth field, discovered one year ago. Locations have been made and are active through well No. 46. All of these wells are on the E. H. Welder land, and produce from sands at 5475 to 5650 feet.

Benedum and Trees' Welder 2, several miles west of Plymouth field, is in sand at 6100-16 feet and is setting 500 feet of 5½-inch liner to bottom preparatory to perforating and making a production test. The sand was said to be very rich, but no drill stem test was attempted due to the smallness of the hole.

Humble Oil & Refining Company is coring at 3995 feet in sidetracked hole in Godwin 1, Taft field. Shell Petroleum Corporation's G. W. Pullin 1 showed 3500 feet of oil, along with 25 pounds pressure in 15 minutes in sand at 3978-85 feet, testing tool seated at 3965 feet, but is now coring for the 4400-foot sand. Should it produce in the lower sand, a twin well likely will be drilled.

Heaving shale was reported to have been logged in Willis Storm's Nancy Hobbs 1-A, near Mathis, San Patricio County. The well is making hole at 5810 feet in that formation.

Houston Oil Company et al's E. A. Hawkins et al 2, north of the San Diego gas field, Jim Wells County, has been plugged back from 6301 feet to 5300 feet to sidetrack and redrill the sand section from 6256 feet to the total depth, which showed oil and gas. A drill stem test was attempted, but drill stem collapsed. O. W. Killam's Reynolds 1, Section 32, 1½ miles west of Orange Grove, same county, is an abandonment at 5560 feet.

## SECOND SAND FOUND

### Samfordyce well flows 10 barrels per hour

**Mission, Texas.**—Second producing horizon for Samfordyce field, Hidalgo County, was definitely established last week when J. T. Barlow et al's Marta F. de Chapa 1, 3500 feet north of production, flowed at the rate of 10 barrels per hour through ⅛-inch choke and showed pressures of 500 pounds on tubing and 200 pounds on casing. It is bottomed at 2966 feet, with sands at 2951½-55 and 2964-66 feet. The well started building up high gas pressures, however, and on 1/16-inch choke it showed 1000 pounds on tubing and 1225 pounds on casing. It is being reworked in an effort to reduce the gas pressure.

About 1000 feet southwest of this well, Henshaw Brothers and Lee Davis' Felipe Farias Heirs 1 cored the sand considerably lower at 2984-87 feet and drilled to 3024 feet. It was too low to produce and showed salt water. Casing has been set at 2813 feet; it will be perforated for completion as a gasser at 2769-85 feet in the upper sand.

In Mercedes field, Union Sulphur Company has gun perforated at 7545-49 feet in American 7 and is attempting completion. American 8 is at 7502 feet, with casing set at 7350 feet. It is waiting on cement. American 9 is drilling at 3625 feet.

## SOUTH TEXAS

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BEE COUNTY— | | |
| Herbert Aid, W. A. Boothe 2, Blanchard sur (W. Tuleta) | * | 3936 |
| Sun, C. S. Page 6, Young sur (Dirks) | 350 | 3825 |
| United, G. A. Ray 52, T. Hanson sur (Pettus) | 95 | 3955 |
| BEXAR COUNTY— | | |
| Tom Anderson, C. J. Krause, 200 ft n road, 150 ft s of Medina River, McCullough sur | * | 350 |
| W. H. Schaeffer Co., P. J. Coimperlik 1, 450 ft wl 300 ft sl of 102-ac tr, T. M. Bustillos sur | * | 834 |
| A. Mihaliski 1, 1167 ft sl, 730 ft wl of 98-ac tr, T. M. Bustillos sur 29 | * | 500 |
| BLANCO COUNTY— | | |
| Rowe & Nixon, Polk Morrisey 3, 2100 ft sl, 1540 ft wl of 222-ac tr, T. Webb sur 91 | * | 212 |
| CALHOUN COUNTY— | | |
| Continental, Am. Nat. Realty Co. 2-A, 660 ft nl, 510 ft wl of ne¼ ne¼ sec 6, blk C, P. Garcia sur | * | 9083 |
| Crown Central, et al, M. C. Driscoll 1, 990 ft nel and nwl of lot 24, Armstrong Ranch sub, B. Maralles sur | * | 7010 |
| DUVAL COUNTY— | | |
| Atlantic, J. F. Welder 4-D, sec 113 (Seven Sisters) | 350 | 2504 |
| J. F. Welder 7-D, sec 113 (Seven Sisters) | 750 | 2495 |
| J. F. Welder 2-E, sec 381 (Seven Sisters) | * | 3168 |
| Buchanan & Blanco, J. F. Welder 11, sec 385 (Seven Sisters) | 35 | 2211 |
| Diamond Half Oil Co., R. Serna Jr 3, sec 384 (Seven Sisters) | 35 | 2209 |
| Dulce Oil Co., R. Serna Jr 1-B, sec 384 (Seven Sisters) | 475 | 2208 |
| Duval Oil Corp, Bishop 20, sec 59 (Loma Novia) | 150 | 2542 |
| Highland Oil Co., Hubbard 7, sec 75 (Loma Novia) | 280 | 2553 |
| Hubbard 9, sec 72 (Loma Novia) | 900 | 2737 |
| Howard Pet. Co., G. Ruiz 1, sec 5 (Loma Novia) | * | 3502 |
| Humble, Hubbard 6-B, sec 83 (Loma Novia) | 347 | 2782 |
| Mid-Continent, R. Serna 7, sec 384 (Loma Novia) | 275 | 2216 |
| Reed & Stover, C. W. Duke 1, sec 64 (Loma Novia) | * | 2753 |
| Rogers & Rogers, Sutherland 2, sec 120 (Hoffman) | * | 3027 |
| Shell, V. Mendosa 2, sec 68 (Loma Novia) | 616 | 2796 |
| Texas Co., Duval Ranch 15, sec 100 (Piedra Lumbre) | 325 | 1970 |
| Hugo Wendt 27, sec 68 (Loma Novia) | 375 | 2735 |
| Hugo Wendt 31, sec 68 (Loma Novia) | 800 | 2707 |
| Texla Oil Co., S. Benavides (Volpe) 1-C, 967 ft nl, 2347 ft wl of 560-ac tr, sec 170 | * | 2686 |
| Westheimer & Daube, Z. Campos 7, sec 224 (Seven Sisters) | 450 | 2221 |
| GUADALUPE COUNTY— | | |
| J. W. Kniffin et al (Ramona) Mrs. Katie Lay 1, J. K. Davis sur (S. Darst Creek) | 288 | 2413 |
| A. C. Locke, H. Holmes 1, 400 ft wl, 200 ft nl of 26-ac tr, Cyrus Campbell sur, temp abnd | * | 530 |
| HIDALGO COUNTY— | | |
| J. H. Anderson, Tr, F. B. Guerra 3, tr 254, por 40 (Samfordyce) | 350 | 2733 |
| J. W. Edwards, J. F. de Lopez 2, tr 267, por 38, 39-40 (Samfordyce) | 400 | 2797 |
| Frank Powell, George 1, tr 13, por 41 (Samfordyce) | 350 | 2763 |
| JIM WELLS COUNTY— | | |
| O. W. Killam, Geo. Reynolds 1, 330 ft nl and el of P. H. Bell sur 32 | * | 5560 |
| McMULLEN COUNTY— | | |
| John F. Camp Dr. Co., C. E. Byrne 2, 330 ft s and 3900 ft e of sw cor of 206-ac tr, but in Geo. Pittuck sur | † | 304 |
| Loma Oil Co., Jacob Corp. 106-A, McFaddin sur (Jacob) | * | 970 |
| Luray Oil Co., Glass (Fee) 10, M. Hely sur, blk 46 (Calliham) | * | 1052 |
| Reliance O&R Co., Shiner 2, 330 ft nl and el of se¼ sec 40, Shiner ranch | * | 2202 |
| NUECES COUNTY— | | |
| Bartlett, Bartlett 1, Villareal gr (Saxet Heights) | 750 | 4116 |
| Conroe Dr. Co., G. W. Hatch 2, Villareal sur (Saxet Heights) | 500 | 4103 |
| A. D. Corgey, H. B. Baldwin 1-A, 330 ft nl and wl blk 21, Russell Farm Lots, H. L. Kinney sur | * | 5006 |
| Erin & Coker, B. D. Powell 1, lots 12, 13 and 14, blk 2, Ellendale Gardens No. 3 (Saxet Heights) | 450 | 4077 |
| Tom Graham, O. B. Carver 1, center blk 1, Ellendale Gardens No. 3 (Saxet Heights) | 425 | 4080 |
| J. T. Graham, Jr., C. M. Phillips 1, Villareal gr (Saxet Heights) | 250 | 4079 |
| Ray Johnston, C. A. Pearson et al, lots 9 & 10, Ellendale Gardens No. 2 (Saxet Heights) | 1250 | 4079 |
| Renwar Oil Co. & Maryland Oil Co., Winship 1, blk 12, Clarkwood townsite (Saxet) | 720 | 4423 |
| Republic Nat. Gas Co., H. B. Baldwin 3-B, blk 19, Russell Farm Lots (Saxet Heights) | 825 | 4092 |
| Southern Minerals Corp., Alkali Plant 2, sec 3, Driscoll & Speer Estates (Saxet Heights) | 250 | 4086 |
| T. H. Isensee 3, C. Land sur No. 404 (Saxet) | 950 | 4407 |
| Taylor Ref. Co., W. A. Saunders 1, Shipp Tract (Saxet Heights) | 300 | 4081 |
| Texon Royalty Co., J. L. Scoggin 2, sec 315 (Saxet Heights) | 700 | 4414 |
| W. A. R. Oil Company, Matt Dunn 1, Villareal sur (Saxet Heights) | 975 | 4093 |
| REFUGIO COUNTY— | | |
| Sorey et al, Cable 1, sec 4, blk 8, Sunshine sub, Refugio Town Tracts (Refugio) | 60 | 3694 |
| United Prod. Co., M. F. Lambert 23, C. A. Hardwick sur (Greta) | 275 | 5852 |
| SAN PATRICIO COUNTY— | | |
| Plymouth Oil Co., E. H. Welder 38-C, sec 49 (Plymouth) | 425 | 5646 |
| Welder 39-C, sec 71 (Plymouth) | 350 | 5638 |
| Welder 40-C, sec 49 (Plymouth) | 350 | 5648 |
| Santa Clara Oil Co., J. F. Welder Heirs 4, 2300 ft sel, 1791 ft nel of 1250-ac tr, R. Villareal sur | * | 6004 |
| STARR COUNTY— | | |
| Barnsdall & Phillips, Yturria 8, por 100 (Samfordyce) | 350 | 2794 |
| O. C. Borah et al, V. C. deGuerra 1, 10 ft fr first hole, 3519 ft nl, 2011 ft el of sh 92, por 68 | * | 897 |
| J. H. Clopton et al, Kelsey Bass 3, 655 ft sel, 3435 ft swl of sec 357 | * | 703 |
| Coreta Pet. Co., J. H. Burnett 1, 2680 ft sl, 150 ft wl of tr 47, por 80 | * | 2300 |
| VICTORIA COUNTY— | | |
| American Liberty Oil Co., A. Gaugler 2, R. Manchola gr (Coletto Creek) | 550 | 2861 |
| Dr. E. G. Gray 4, J. M. Brownson sur (Placedo) | 600 | 4771 |
| Crown Central Pet. Co., F. Gebauer 1, Brownson sur (Placedo) | 450 | 4775 |
| WEBB COUNTY— | | |
| Mills Bennett, E. Valadez 1-A, sec 111 (Lopez) | 600 | 2205 |
| Hunter Co., Inc., A. S. Billings 6, blk 1, sec 113 (Lopez) | ¶10 | 2162 |
| O. W. Killam, A. M. Bruni 7, 3280 ft nel, 6437 ft sel of tr, B-7, El Ranchito tr, J. V. Borrego gr | * | 1266 |
| C. H. Lewis, A. Lopez 5, sec 110 (Lopez) | 800 | 2254 |
| Magnolia, S. Benavides 7-B, blk 323, Hale sub, Arispe gr (Cole) | 500 | 2822 |
| G. G. Mortimer, Paula L. Vela 2, sh 8-C, sec 114 (Lopez) | 525 | 2194 |
| Superior Oil Co., A. S. Billings 7, sec 113 (Lopez) | 600 | 2194 |
| The Texas Co., M. W. Brennan 14, blk 424, Hale sub, Arispe gr (Cole) | 250 | 2805 |
| WILLIAMSON COUNTY— | | |
| Holdeman, Nations & Hornberger, H. F. Teggeman 1, 450 ft sl, 1050 ft wl of tr, sec 4, H.T.&B. Ry. sur | * | 1020 |
| ZAPATA COUNTY— | | |
| Locke Purnell, M. Garza Heirs 1, 196 ft nwl, 185 ft nel of blk 14, C. A. Douglas sub, Zorro Ranch, Comitas gr (Escobas) | * | 1867 |

*Failures; †Junked; ¶Million cu. ft. gas.

## COLLINS HELPED

The article "Plymouth Area Reserves—Large Future Production Likely from Interesting Geological District" in the March 30, 1936, issue of THE OIL WEEKLY was listed as having been written by Leavitt Corning, Jr., whereas it should also have carried the name of Melvin Collins as co-author. At the time the article was prepared Mr. Collins was chief geologist for Plymouth Oil Company, but since that time suffered a fatal illness.

# *Austin Chalk*

## OPERATIONS IN PEARSALL FIELD ARE DISAPPOINTING

**San Antonio.** — Discouraging results are being obtained from Austin chalk operations in Pearsall field of Frio County, where several large producers have been completed. The new wells, however, are not showing up for major production, although experimentation may revise the outlook.

Amerada Petroleum Corporation's E. O. Kothman 1, 1½ miles east of the deep production, acidized with 2000 gallons of acid at 5506 feet, the result being that the well flowed from 34 to 81 barrels per day on several gauges, making 32.8 gravity oil.

Same company shot and acidized McWilliams Tract 3, at 5575 feet, resulting in a flow of 515 barrels the first 24 hours and 116 barrels the second. McWilliams Tract 7 is drilling in the chalk at 5407 feet. McWilliams Tract 17 flowed and swabbed 128 barrels in 24 hours at 5676 feet. W. H. Smith 1, which was completed in Buda lime at 5920-27 feet several months ago and recently went dead, has been plugged back and perforated in the chalk at 5360-5500 feet, where it is completing.

Thornton Davis et al's Halff and Openheimer 1, one mile northwest of the present chalk production, has been shot with 140 quarts at 5433 feet with unsatisfactory results, the production being slightly in excess of 100 barrels per day through swabbing. The rotary rig is being moved off preparatory to standardizing.

About 4000 feet west of this production, Termo Company of Texas, is moving in for A. L. Arp 1, to be drilled to the chalk.

Guadalupe County is becoming a rather hot area along the Balcones fault line, the chalk being the main objective. The formation, however, is in most cases above 2500 feet. Several key wildcats are nearing the chalk and will have an important bearing on the development now underway.

In Burleson County, Walter Blumenthal's Crain 1, which drilled to 6340 feet and showed sulphur water and a little oil and gas in the Edwards lime, has been plugged back to 6300 feet and drilled out to 6320 feet. A drill stem test at 6300-20 feet showed no pressure, no oil and a slight bit of gassy mud in 30 minutes. Another test for the area, however, is rumored.

## PETTUS DISTRICT

### Several wildcats seeking Conroe sand production

**Beeville, Texas.**—A new spurt in wildcatting has commenced in the Pettus district with a number of new locations staked for Conroe sand tests through the several counties along this trend.

Several blocks have been assembled in DeWitt, Goliad, Karnes, Bee and Live Oak Counties and work has been started, or shortly will be started, on nearly a dozen wells. This is the most outstanding increase for the district in several months.

Cotton Belt Oil & Gas Company's M. Lutenbacher 1, in Block 25, Goliad Townsite, just south of Goliad in Goliad County, blew out at 5545 feet, was out of control several hours, and bridged over at 3205 feet, where the drill stem stuck. A deal is now pending for drilling a new well or for sidetracking the old hole, which is in the top of the Yegua at this level. The well had an interesting showing in the Hockleyensis at 4435-61 feet, in addition to the new showing.

Another Goliad well being closely watched is Magnolia Petroleum Company's S. J. Tipton 1, near the common corners of Karnes, DeWitt and Goliad Counties, and several miles southwest of Slick field. The well was making hole at 3465 feet at last reports.

Magnolia Petroleum Company's W. A. Boothe 1, west side of the Ray sector of West Tuleta field, tested salt water in the Pettus and Yegua sands and has been abandoned below 4200 feet. About one mile northwest and east of the town of Mineral, The California Company's W. A. Boothe failed to show for a producer in the Pettus topped at 3936 feet and was drilling at 4134 feet at last reports.

R. H. Feltner et al's Carter 1, southwestern portion of Live Oak County, found possibilities of production in the lower Pettus at 3457-66 feet and attempted a drill stem test. Coming out of the hole, the pipe parted and the well is now fishing.

## MIRANDO FAILURES

### Several fields in area are defined

**Laredo.** — Several Mirando District fields were defined by failures during the week. One field, however, was receiving a north extension which probably will bring about additional drilling.

Luling Oil & Gas Company's Peal 1, one-half mile north of Lopez field, Webb County, drilled to 2330 feet after logging gas sand at 2777-90 feet. It has plugged back, set casing through the sand, and will be perforated for completion.

Seven Sisters field, Duval County, was defined on the southwest through failure of Welder 2-E, sw¼ Section 381, which was abandoned at 3168 feet.

Howard Petroleum Company's G. Ruiz 1, Section 5, east of the Loma Novia field, was abandoned at 3502 feet after showing 2000 feet of salt water in sand at 3099-3116 feet. Reed and Stover's C. W. Duke 1, Section 64, in the edge of Loma Novia field, was a failure in Loma Novia sand at 2753 feet.

Rogers and Rogers abandoned Sutherland 2, located 1150 feet northwest of Sutherland 1, in the Hoffman field.

Two miles southeast of the Cole field, Duval County, Texla Oil Company's S. Benavides 1-C, topped Government Wells sand at 2646 feet, drilled to 2686 feet and was abandoned.

## COLONEL DAVIS DEAL

### Carter buys holdings of United North and South

**San Antonio.**—Sale of all of United North and South Oil Company's holdings to A. F. Carter of Houston for $675,000 cash and an overriding royalty of all production was approved in the Federal District Court here April 15. The deal includes 17 wells in Darst Creek field, Guadalupe County, producing 580 barrels per day, and two 8000-foot producers on a large block in the Buckeye field of Matagorda County.

Under the terms of the deal, Carter is given a reasonable time to make the cash payment and is to then take over operation of the properties, paying 1/32 of ⅞ of all pumped oil and 1/16 of all flowed oil produced from the properties.

There were several bids, but this bid

TURN WITH COMPLETE EASE . . .
*this improved CURTIN Centrifuge*

You can maintain the required speed for the period of the test with minimum effort. Curtin Centrifuges are heavy duty type, rigidly constructed, and extremely simple in design. The cranks and heads for 15 c.c. and 100 c.c. machines are interchangeable.

***Ask for this Bulletin giving details and prices on all CURTIN Centrifuges and Tubes.***

No. 3480

W. H. CURTIN & COMPANY, INC.
HOUSTON, TEXAS

## "Inside Information"

**We know what goes on inside your well. And we know what it takes to "cut down your underground overhead." That's why we've been able to build *better pumping equipment* since 1901. A partial list:**

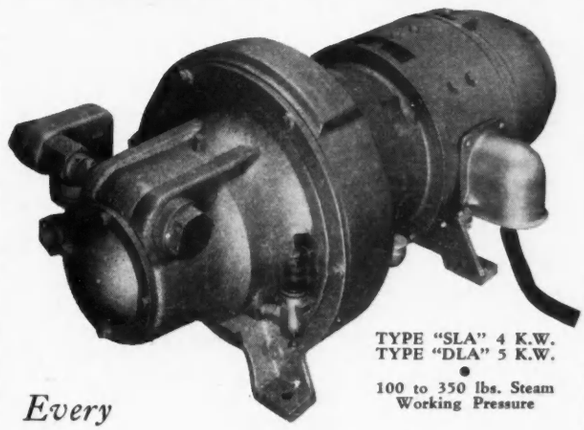
- **Huf-Duo Insert Pump** prevents sanding, saves time and labor, insures long life. For 2", 2½" and 3" tubing.
- **Huf-Stripper Insert Pump,** for stripper wells or continuous pumping of deep wells. Made 1" for 2" tubing and 1⅜" for 2" tubing.
- **Huf-Supersize Insert Pump** is a large-capacity insert-type working barrel. Eliminates many tubing jobs. For 2½" and 3" tubing.
- **Hough Balls and Seats** are guaranteed tight. Five distinct types meet the entire range of operating conditions.
- **Hough Seamless Steel Working Barrels** are made to A.P.I. specifications from highly specialized cold-drawn tubing. All standard sizes.
- **Hough Working Barrel Valves** are close-fitting and efficient. Made to A.P.I. specifications in steel. Bronze if specified.

**Oil field distributors carry Hough products in stock. See us in Booths 313-315 at the O. E. and E. Exposition at Houston, April 20-25. The Charles N. Hough Mfg. Company, Franklin, Pa.**

## HOUGH OIL WELL SPECIALTIES



## *Installed and Serviced*



TYPE "SLA" 4 K.W.
TYPE "DLA" 5 K.W.
●
100 to 350 lbs. Steam Working Pressure

*Every*

## *Garrott Steam Turbo Generator*

**is installed by our specially trained men. This insures a perfect set-up from which you get absolutely satisfactory service.**

**Our Service does not cease with the installation. Our men make regular inspection tours to check the operation.**

**Full details about this improved design steam generator will be sent on request.**

**GARROTT BRASS & MACHINE CO.**
**1718 ENNIS ST. HOUSTON, TEXAS**



# SUPREME IN THE OIL FIELDS

## *GENUINE* WILLIAMS' "VULCAN" Chain Pipe Tongs

**● Up and down the oil fields you will find "VULCANS" doing the tough jobs just as readily as routine work. Every part of this famous tool is built to bear its share of the load. Chains are proof-tested and certified. Jaws and Handle are tough drop-forgings . . . Through-bolt is extra heavy, and its U. S. Standard Nut simplifies replacement. Nine sizes with either Flat Link, or Cable Chain—⅛ to 18" pipe.**

*"Vulcan Superior" Vise with adjustment handle on top.*

*Genuine "Vulcan" . . . the original Chain Pipe Vise.*

**J. H. WILLIAMS & CO.**
**75 Spring St., New York**

**Headquarters for: Drop-Forged Wrenches (Carbon and Alloy), Detachable Socket Wrenches, "C" Clamps, Lathe Dogs, Tool Holders, Eye Bolts, Hoist Hooks, Thumb Nuts and Screws, Chain Pipe Tongs and Vises, etc., etc.**

**BUY FROM YOUR DISTRIBUTOR**

**WILLIAMS**
**SUPERIOR DROP-FORGED TOOLS**

was considered the most acceptable by R. O. Huff, master in chancery; J. C. Mowinkle and R. J. Boyle, receivers; and a committee of creditors. The approval was by Judge R. J. McMillan.

United North and South Development Company, insolvent, is headed by Edgar B. Davis, one of the most colorful figures in the oil industry. Fifteen years ago he drilled Rios 1, near Luling, Caldwell County, to open the Luling field and establish first Edwards lime production. After taking $4,000,000 in oil, he sold the properties to the Magnolia Petroleum Company for $12,000,000. He gave exceptionally large bonuses to his employes, donated millions to various causes, arts, etc., in addition to spending great sums on wildcatting, drilling some 25 wildcat failures before discovering the Buckeye field. Ten years ago, he drilled to 7500-foot wells in the Luling field, the deepest holes in the world at that time.

Despite the reverses, Colonel Davis will continue in the oil business in an effort to amass another fortune in order to continue his philanthropy.

## API PROGRAM

### Preliminary schedule for Mid-Year meeting given

NEW YORK.

MEETINGS of 46 committees, of the Divisions of Production and Refining, and of the Board of Directors are scheduled on the preliminary program of the American Petroleum Institute's Sixth Mid-Year Meeting to be held May 13, 14, and 15 at Tulsa, Oklahoma.

The meeting, regarded as the Institute's technological forum, is expected to bring together hundreds of producing and refining engineers for discussion of pertinent current problems and developments of the petroleum industry. Group sessions will be held each morning and afternoon by the divisions. Division of Production meetings are scheduled for the Crystal Ball Room of the Mayo Hotel. Division of Refining meetings will be held in the Junior Ball Room. Committee meetings will be held in rooms and at times to be assigned and announced in the final program. No meetings have been scheduled for the Division of Marketing.

The Division of Production group session Thursday morning, May 14, will be given over to a discussion of the general subject of drilling practice. The Division of Refining session will consider lubrication. Production practice will occupy the attention of those attending the Division of Production meeting Thursday afternoon. The Division of Refining session will be devoted to miscellaneous subjects such as clay treating and color restoration.

Production allocation problems and research will come before the Division of Production Friday morning, May 15. Dewaxing will be considered by the Division of Refining.

Committee meetings will occupy the entire day, Wednesday, May 13. The Institute's Board of Directors is scheduled to meet in the Lounge Room Thursday morning, May 14.

The preliminary program for the Institute's Sixth Mid-Year meeting for the production division follows. A final program will be announced early in May.

**Thursday, May 14, 1936**
9:30 a.m.

**Drilling Practice:**
(16th Floor—Crystal Ball Room)
Sponsored by the Central Committee on Drilling and Production Practice.
Papers on the following subjects are now under consideration by the Program Committee:
- Recent Developments in Rotary Drilling.
- Use of Recording Gauges in Drill Stem Tests.
- Welding Casing Strings.
- Nickel-Alloy Steels in Production Equipment.

10:00 a.m.

**Board of Directors:**
(16th Floor—Lounge Room)
2:00 p.m.

**Production Practice:**
(16th Floor—Crystal Ball Room)
Sponsored by the Central Committee on Drilling and Production Practice.
Papers on the following subjects are now under consideration by the Program Committee:
- Control of Water in Pumping Wells and Proper Completion of Wells.
- The Economic Life of Sucker Rods.
- Individual Well-Servicing Units.
- Back-side Crank Pumping.

**Friday, May 15, 1936**
9:30 a.m.

**Production Allocation Problems and Research:**
(16th Floor—Crystal Ball Room.)
Sponsored by the Central Committee on Drilling and Production Practice.
Papers on the following subjects are now under consideration by the Program Committee:
- Productivity Index.
- Relation of a Gas-Cap Operator in an Allocation Program.
- Influence of Well Spacing on Ultimate Recovery.
- Studies of Source Beds in the East Texas Basin.

## TEXAS DEMAND HIGH

### Buyers file nominations for 1,301,524 barrels

AUSTIN.

INDICATING the high demand for petroleum, purchasers of crude oil in Texas filed nominations with the Texas Railroad Commission at the regular statewide proration hearing for the purchase of 1,301,524 barrels per day during May. These included the following district totals: Southwest Texas, 139,297 barrels; Gulf Coast, 199,041 barrels; Conroe, 54,450 barrels; Van, 49,940 barrels; East Central Texas, 4614 barrels; East Texas, 487,837 barrels; the remainder of the East Texas district, 11,113 barrels; West Central Texas, 42,614 barrels; West Texas, 206,739; North Texas, 47,001 barrels, Panhandle, 58,888 barrels.

The United States Bureau of Mines reported to the commission that the market demand for Texas crude during May would be 1,139,000 barrels daily, and recommended an allowable of 1,132,500 barrels per day because stocks of Texas oil were increasing.

It was announced that the daily allowable for Texas under commission regulations was 1,173,767 barrels on April 15. The allocation having grown to this figure because of completions after the permitted output was determined the first of the month.

Commission Chairman E. O. Thompson pointed out that for the past four months, the indicated production as determined by the Bureau of Oil Accounting of the Texas Railroad Commission had been approximately two percent less than the allowable. Thus, he anticipated that, although the state allowable was 1,173,767 barrels per day, the actual production was probably in the neighborhood of 1,135,000 barrels per day which would indicate that the commission allowable and the Bureau of Mines recommendation were approximately the same.

The most important discussion of the statewide hearing last week resulted from a request filed by the State Board of Education for a per well allowable in the Corpus Christi field.

Joe Gulecke, board member, prefaced this request with a discussion of the effect of proration on public school lands in Texas. From his remarks, those present at the hearing gathered that the Board of Education planned to join with the State Land Commission to effect the highest possible allowable production for wells on state lands in Texas.

Gulecke read a letter from Land Commissioner J. H. Walker urging that the acreage proration system be abandoned and that the per well system be installed in those fields where the state has an interest.

Panhandle operators appeared to protest the activities of the Phillips Petroleum Company. Vance Huff, attorney for several of the independent operators, charged that Phillips Petroleum Company had promulgated its own proration schedule and that the operation of this schedule resulted in unratable production which was detrimental to the small operators but advantageous to Phillips Petroleum Company.

Huff placed a witness on the stand who testified that through the operation of the plan, Phillips Petroleum production had been cut 144 barrels per day, while that of small operators from whom Phillips Petroleum Company was buying oil had dropped 1134 barrels or an average of 17.47 percent.

Don Emory, Phillips Petroleum Company attorney, explained that Standish Pipe Line Company, a Phillips company subsidiary was taking the oil from the field and delivering it to Phillips Petroleum Company, but that the pipe line company did not buy any oil.

He announced that the pipe line company, acting as a common carrier, would be willing to accept for transportation all oil up to the allowable fixed by the commission and transport this oil at the usual rate to its storage facilities and hold it there a reasonable length of time for diversion to other points.

V. E. Cottingham, commission petroleum engineer, recommended a reduction in the allowable for the East Texas field of approximately 5000 barrels per day.

He stated that the average bottom-

# 2 HIGH SPOTS IN WIRE LINE MANUFACTURE

• Purple Strand—in itself—is an unusual line where extreme strength is required

*and*

• Where *Preformed* suits your requirements better, "Form-Set" Purple Strand — Williamsport's method of *Preforming*—will give you remarkable service.

Purple Strand

PURPLE STRAND

Let us send you our new Catalog and manual just off the press. Tell us what your requirements are and the service you require. Our engineers will gladly aid you. . . . You'll be pleased with our way of doing business.

Oil Country Sales Offices: Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Okla; 10 North Milby St., Houston, Texas.

Mid-Continent Supply Co., Distributors in Texas, Louisiana and Arkansas

Form-Set

Williamsport

WIRE ROPE COMPANY

WILLIAMSPORT, PA. 122 SO. MICHIGAN AVE. CHICAGO, ILL.

*Other Offices in All Principal Cities*

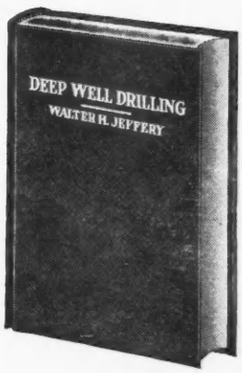


THIRD EDITION

of the Well Known Book

# DEEP WELL DRILLING

*by* WALTER H. JEFFERY




New Chapters:

**Geophysical Prospecting and Air Mapping.**

**Straight Hole Drilling and the Treatment of Crooked Holes.**

**Water Supply.**

**The Gas-Air Lift Method of Producing Oil.**

**A. P. I. Codes.**

Preparatory to writing book, the author spent weeks in a first hand study of modern methods of drilling by the rotary system, and of completing wells, controlling high pressures and operating wells in the deep fields of California and Oklahoma.

The third edition contains 816 pages, 150 more than the second edition, and 452 illustrations. Price, $6.00.

*Send Check to*

**GULF PUBLISHING COMPANY**

**3301 BUFFALO DRIVE HOUSTON, TEXAS**

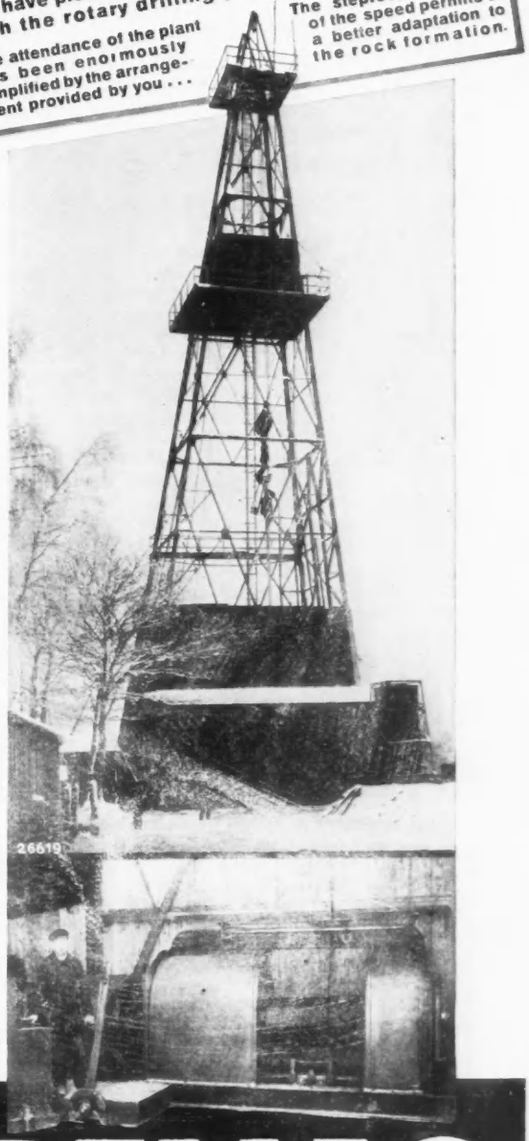


# All's well! - with this Well. The verdict of an expert:

We have pleasure in confirming our entire satisfaction with the rotary drilling plant supplied by you . . .

The attendance of the plant has been enormously simplified by the arrangement provided by you . . .

The stepless regulation of the speed permits of a better adaptation to the rock formation.




# DEMAG

## Rotary Plants for deep well drilling

For further particulars apply to

**DEMAG, A. G., DUISBURG, GERMANY**

hole pressure had declined 4.77 pounds from March 12 to April 12 which was an average drop of .346 pounds per million barrels of allowable oil. This resulted in an average pressure for the entire field of 1197.41 pounds. During the elapsed period, the daily allowable for the field was 444,384 barrels. Cottingham recommended that the allowable factor be fixed at a point that would effect an allowable of 44,000 barrels per day on May 1.

## A. P. I. MEETING

### Institute eastern sector meets June 4 and 5

**Pittsburgh.**—Announcement has been made that the spring meeting of the Eastern District of the American Petroleum Institute's Division of Production will be held June 4 and 5 in the William Penn Hotel at Pittsburgh, Pa. The program calls for four sessions for discussion, among other subjects, of drilling in gas wells under high pressure, repressuring limestone producing areas, taxation of oil production, gas measurements, and present signs for Eastern oil and gas production. It is expected that speakers will review the oil production situation of Michigan and Ohio. The annual stag dinner will be held the night of June 4.

President Axtell J. Byles, of the Institute, has accepted an invitation to address the meeting on the subject of "Production and the Compact."

The meeting will be in charge of the following committee chairmen: Program, J. C. Askam, The Ohio Oil Company; Attendance, George Wittmer III, Wittmer Oil & Gas Company; Arrangements, Fred Benkert, Peoples Natural Gas Company; and Registration, F. E. Eckert, of Hanley & Bird.

# *Cotton Lake Field*

## DEFINITELY ESTABLISHED BY 25 BARRELS HOUR FLOW

WEEKLY STAFF REPORT

**Houston.**—The Cotton Lake prospect, Chambers County, Texas Gulf Coast, became an oil field April 16 when Salt Dome Oil Corporation and Gem Oil Company's Lawrence 2 came in flowing an estimated 25 barrels of oil and washwater per hour through a ¼-inch choke from Marginulina sands at 6642 to 6661 feet.

After washing the well several hours April 16, it "kicked off" and started flowing oil and washwater. On a 2-hour gauge April 16 the flow was 31.56 barrels of 36.3 gravity oil at 84 degrees F. The well was 75 percent cleaned and was flowing through a ¼-inch choke with a tubing pressure of 600 pounds. The casing was sealed. On a 24-hour gauge it made 214.35 barrels of 38 gravity oil through a ¼-inch choke with a tubing pressure of 550 pounds. The estimated gas/oil ration was 700 to 1.

The well was drilled to 6661 feet in the Marginulina formation showing oil. The top of the oil sand was found at 6651 feet. After making a drill stem test from 6642 to 6661 feet and showing 650 feet of clean pipe line oil, 7-inch casing was set at 6647 feet.

Salt Dome Oil Corporation has made location for Lawrence 1, 488 feet west of the discovery well, and drilling pends a permit from the Texas Railroad Commission.

No arrangements have been made for a market outlet. It is believed that the discoverers will lay a line from the well to Sinclair-Prairie and Atlantic Pipe Line Company's lines running from Barbers Hill to Galveston Bay.

Lawrence 2 forces several offset locations. Tide Water Oil Company, Humble Oil & Refining Company and Fohs Oil Company have offset acreage. The discovery well is 200 feet north of the south line and 275 feet from most easterly east line of an 83-acre lease in a 333.05-acre tract, approximately 10,300 feet from the west line and 2800 feet from the north line of the S. Barrow Survey. It is west of the same operator's Lawrence 1, which was abandoned some time ago.

Two miles south of the discovery well, Humble Oil & Refining Company purchased a 206-acre tract, paying a cash consideration of $20,000 plus a 1/24 override. Royalty in the area of the discovery well is bringing $225 per acre base.

### Amelia a Jinx

Amelia field, Jefferson County, appears to be a jinx to operators in that area. With 7 tests drilled in the area, only one has produced commercial oil, one has been a gas and distillate producer, one a gas fire, and the remaining four failures.

The latest disappointment in the field was Humble Oil & Refining Company's R. C. Miller 2, 1850 feet north of Miller 1 and west of the discovery well, A. Savery survey. It was abandoned April 17 at 6881 feet. Previously the well was drilled to 7882 feet and failed to pick up the sand which was found in the discovery well. Instead it found salt water. The hole was plugged back to 6502 feet, sidetracked, and redrilled to the abandoned depth.

Miller 2 stood a good chance of becoming a producer after Miller 1 was abandoned at 6470 feet. Miller 1 was the highest well in the field structurally, and it was thought certain that Miller 2 would also run high.

Glenn H. McCarthy's Longe 2, 660 feet north of Longe 1, H. Williams Survey, blew out last week at 5581 feet and caught fire. It is in a new sand. The well burned for 2 days and then choked up for a moment, which allowed the flame to go out. After this


**Pierce**

***Universal* Governors**

***Meet Every Requirement*—Pierce Governor outfits, complete, are available for nearly all standard industrial engines, but the Pierce Universal Governor was developed especially for automotive engines that have been converted into stationary power plants. These governors can be used on any make or model of engine. They are suitable for governing any engines used for operating pumps, welding generators, lighting generators, air compressors, hoists, etc.**

**CLOSE REGULATION—Pierce Universal Governors are belt driven and either flat or V-belts may be used. The governors are of the centrifugal (or flyball) type and respond instantly to each change in engine load, maintaining a uniform speed regardless of load variation.**

**Because of their efficiency, Pierce Governors have been regular equipment on a majority of the standard industrial engines and on various types of industrial machines. No better governors are obtainable. Write for literature and prices.**

The Pierce Governor Co.

**600 Ohio Avenue, Anderson, Ind.**

the well blew out again and was making gas and distillate. April 17 the fire fighters were trying to bring it under control. The fire is estimated to have done over $100,000 damage, but the drilling crew escaped injury when the well blew out.

The same sand at 5581 feet was encountered in Longe 1 at from 5595 to to 5640 feet and showed 13 ohms on an electrical logging device. Longe 1 is producing from 5835 to 5855 feet. Longe 2 was given a production test at 5424 feet. The oil sand was found at 5400 feet down to 5418 feet. After washing and swabbing the well for some time it would not flow. However, oil was recovered. Longe 2 later was then drilled to 5581 feet, where a sand was topped. The well was in this sand when it blew out and caught fire.

Atlantic & Brace's E. E. Hardy 1, north of the discovery well in the Hardin field, J. Robeson Survey, Liberty County, missed the producing sand that was found in Jack Frazier's Lynott Buffom 2 around 7642 feet. At the end of the week the operators were drilling and coring below 7668 feet. They previously had made a drill stem test from 7498 to 7549 feet which showed 7 thribbles of salt water and mud through a ¼-inch choke on top and a ⅜-inch choke on bottom in 7 minutes. An electrical logging device failed to show anything of commercial value. Sand and shale were cored from 7393 to 7549 feet. A soft sand with an odor of oil was encountered at 7503 feet.

Manvel field, Brazoria County, was extended one location north last week when Bowles & Barsodi's Norvell 5 was completed in lower Marginulina sand at 5725 feet for 25 barrels per hour. Norvell 5 topped the oil sand at 5630 feet and set 7-inch casing at 5694 feet. The well came in April 16 flowing an estimated 25 barrels of fluid per hour through a 7/32-inch choke. Tubing pressure was 500 pounds; casing pressure, 600 pounds.

Turman Oil Company also completed Hart 3 in lower Marginulina sand last week at 5729 feet. The well came in for 29 barrels per hour through a ¼-inch choke with a tubing pressure of 575 pounds and a casing pressure of 650 pounds. It is located in the H. & T. B. Survey, Block 8, being 200 feet from the west and 185 feet from the south line of the survey.

Three new producers were added to the Anahuac field, Chambers County, last week, one of them being the second well to produce from the Marginulina sand in the field.

Humble Oil & Refining Company's Grippon 3, H. & T. C. Survey, Section 51, was finaled at 7067 feet in Marginulina sand. The well was drilled to 7246 feet in Frio formation. Top of the regular Anahuac producing sand was encountered at 7226 feet. This sand carried salt water. The hole was plugged back to 7076 feet and 7-inch casing was set at 7042 feet. Sand showing oil was found from 7048 to 7067 feet.

Grippon 3 came in for 28 barrels of 34.9 gravity oil per hour through a ¼-inch choke, with a tubing pressure of 950 pounds and a casing pressure of 1050 pounds. Top of the Discorbis was encountered at 6072 feet, Heterostegina at 6406 feet, Marginulina at 6770, and Frio at 7226 feet.

The same operator's Wilcox 2, H. & T. C. Survey, Section 50, was completed in regular Frio producing sand at 7093 feet. The well came in for 23

## TEXAS GULF COAST

### Completions

| Company, Wel and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| ANAHUAC— | | |
| Humble, Grippon 3 | 672 | 7067 |
| Wilcox 2 | 552 | 7093 |
| BIG CREEK— | | |
| Tran State Oil Co., Ahlers 3 | * | lcn |
| CLAY CREEK— | | |
| Sun, Freeman 3 | 65 | 1356 |
| ESPERSON— | | |
| General Crude, Esperson 25 | 576 | 2805 |
| HULL— | | |
| Gulf, Phoenix 107 (wo) | 125 | 3418 |
| LOUISE— | | |
| Pure, Garrott B-1 (wo) | * | 6443 |
| Lancaster 3 | 176 | 5154 |
| MANVEL— | | |
| Bowles & Barsodi, Norvell 5 | 600 | 5725 |
| Turman Oil Co., F. Hart 3 | 696 | 4461 |
| PIERCE JUNCTION— | | |
| Roxie Wright, Gulf Fee 1 | 100 | 3335 |
| TOMBALL— | | |
| Humble, Reid 13 | 192 | 5569 |
| HARRIS COUNTY— | | |
| E. E. Young, Griffith 2, w of Humble, A. R. Bodeman sur | * | 4485 |
| JEFFERSON COUNTY— | | |
| H. C. Bishop, Grinell 1, n of Port Arthur, Grisby sur | * | 8834 |

*Failures; †Junked; ¶Million cu. ft. gas.

**If you are interested in modern, money saving oil field equipment be sure to see the Chiksan Exhibit *in The Gulf Engineers Inc., booths.***

**Be sure to see the New Chiksan Aluminum Dock Hose, Joints and Risers. Made of special alloy heat treated aluminum.**

Chiksan

**CHIKSAN OIL TOOL CO. LIMITED**

FULLERTON, CALIFORNIA — GULF ENGINEERS INC., HOUSTON, TEXAS

barrels of crude oil per hour through a ¼-inch choke with a tubing pressure of 1350 pounds. Top of the oil sand was penetrated at 7038 feet and 7-inch casing was set at 7040 feet.

Humble Oil & Refining Company's Tyrell 6, H. & T. C. Survey, Section 52, was drilled to 7085 feet and completed as a producer for 28 barrels per hour through a ¼-inch choke with a tubing pressure of 1050 pounds; casing pressure 1050 pounds. The operators set 7-inch casing at 7040 feet after encountering the oil sand at 7005 feet.

H. C. Bishop abandoned Grinell 1, north of Port Arthur, during the past week at 8834 feet after testing salt water in Frio formation. Top of the salt water sand was encountered at 8615 feet. The operators ran an electrical logging device to 8709 feet. It failed to show anything. Grinell 1 is 330 feet east of the west line and 660 feet south of the north line of Block 8, Bishop subdivision, or 2620 feet southwest along the northwest line of survey from north corner, thence 960 feet southeast at right angles in the Grisby Survey, Abstract 125. Discorbis was topped at 7221 feet, Heterostegina 7576, Marginulina 7978 and Frio at 8528 feet. Elevation is 13 feet.

On Cedar Lane prospect, Matagorda County, John Deering's Estille 1, Tone & Jamison Survey, made a drill stem test from 6772 to 6788 feet and showed 40 fourbles of salt water and no pressure through a ¼-inch choke on top and a ⅜-inch choke on bottom. The test was made in 26 minutes.

Interesting field locations announced during the past week were as follows: Kenben Oil Company's Maco Stewart 1, W. K. Wilson Survey, being 660 feet south of Coast Petroleum Corporation's Maco Stewart 1, in the southwest portion of the Dickinson field, Galveston County; Humble Oil & Refining Company's Maco Stewart B-6, 1136 feet north of the south line and 245 feet east of the west line being the east half of Block 16 in the Batey subdivision, or 933 feet northwest of Humble Oil & Refining Company's Maco Stewart B-1 in the W. K. Wilson Survey. The Texas Company's Merek 2 is north 70 degrees 27 minutes west 1400 feet and north 19 degrees 33 minutes east, 1400 feet from the southeast corner of lease in the George Reynolds Survey, Abstract 44, Pickett Ridge field, Wharton County. In the Hastings field, Stanolind Oil & Gas Company's J. C. Cannon 3, 330 feet from the north line and 330 feet from the east line of a 40-acre tract in H.&T.B. Section 36, J. Sneed 1, 330 feet from the east line and 330 feet from the northwest line or 348 feet from the west line of a 15-acre tract, and J. Sneed Survey, Wooster 4, A.C.H.&B. Section 1, 230 feet from the north line and 230 feet from the southeast line of a 70.8-acre tract. In the Anahuac field, Chambers County, Sun Oil Company's White 13, J. McGehey Survey, 662 feet west of the east line and 1293 feet north of the south line of tract and survey. Van Vleck field, Matagorda County, Skelly Oil Company's Rudgeley 1, 466 feet west of the east line and 372 feet south of the north line of lease, being a west offset to Cobb B-5 in the M. Cummings Survey; same operator's Cobb B-6, 466 feet from the south line and 2900 feet from the west line of lease in the M. Cummings Survey.

# *Sorrento Deal*

## PAN AMERICAN BUYS PRINCIPAL PRODUCTION

**Lake Charles.**—Pan American Production Company purchased the capital stock of Athens Oil Company during the past week for a reported cash consideration of $150,000 and $250,000 out of oil. By buying the capital stock of Athens Oil Company, Pan American Production Company acquired the principal producing properties in the Sorrento field, Ascension Parish. The deal was effective April 1.

The deal included about 4000 acres, covering all the Sorrento dome with the exception of a small portion on the west side. Three producers from the cap rock formation which yield approximately 60 barrels daily were acquired. Pan American Production Company also took Athens Oil Company's three flank wells which are producing around 500 barrels daily and also the fourth well which has been shut down at 4332 feet in oil sand waiting the consummation of the deal. The well had sands showing oil from 4301 to 4330 feet.

Seven-inch casing was set at 4291 feet. On an electrical logging device the well showed 120 millivolts and 140 ohms.

The acreage at Sorrento dome was originally controlled by Gulf Oil Corporation which farmed the acreage to Union Sulphur Company. The latter company drilled a number of wells on the flanks of the field in search of a new sand. Upon being unsuccessful the acreage was returned. In 1935, Gulf Oil Corporation farmed the acreage to Turnbull & Irwin who in turn farmed it to Athens Oil Company. Athens Oil Company drilled a flank well and discovered a new producing sand for the field. All three of the flank wells have come in for nice producers.

Pan American Production Company intends to take charge of the field immediately and get ready to develop in an orderly manner. Several of the wells will be reworked and new wells drilled. This will give Pan American Production Company a foot hold in the Louisiana Gulf Coast. The operators recently discovered a new producing sand at Port Barre in St. Landry Parish and that is the only production that the company has in this area.


**WAREHOUSES**

***on the spot and up, ready to do business in a hurry.***

**Oil Field Supply Companies, manufacturers and others needing stocks in new fields, quickly, should use Houston Ready-Cut House Co. Sectional (Portable) Warehouses. We can supply them in frame or galvanized iron sectional.**

**These warehouses can be erected in 72 to 98 hours after arrival on site. All stock warehouses can be shipped 24 hours after order is received.**

**HOUSTON READY-CUT HOUSE CO.**

**HOUSTON, TEXAS**


## GAS RATE SUIT

**Austin.** — Community Natural Gas Company has been granted a temporary injunction in the 98th District Court restraining enforcement of the railroad commission order reducing the domestic gas rate for the City of Sherman.

The order was to have become effective on April 12, and cut the rate from 67½ to 57 cents per thousand feet.

No date for hearing of the case has been set by the court.

## LOUISIANA STRIKES

### New Caillou Island sand; two fields are extended

**Lake Charles.**—A new producing sand was discovered in the Caillou Island field, Terrebonne Parish, Louisiana Gulf Coast, April 13, when The Texas Company brought in Terrebonne Bay 2, Section 19-23s-20e, for 1500 barrels daily.

This new producing sand is around 800 feet deeper than the regular producing horizon. Terrebonne Bay 2 encountered sands showing oil at 6838 feet, and on a drill stem test from 6829 to 6830 feet showed 3 fourbles of oil and 6 fourbles of mud. The oil tested 37.5 gravity at 80 degrees. The well also had a good gas blow. After making the drill stem test, 7⅝-inch casing was run to 6844 feet and set with 450 sacks of cement.

Heretofore, the field has produced from Miocene sands at 3239 to 4981 feet; 5981 feet and 6094 feet. Not only does this well discover a new sand for the Caillou Island field but also is the deepest test to be drilled in the area.

The Jeanerette field, St. Mary Parish, was extended 960 feet west last week when Herton Oil Company completed Banta 1 in the Roane sand at 6650 feet for 33 barrels per hour through a ¼-inch choke. Banta 1, 960 feet west of Roane 2, in Section 40-13s-9e, topped the oil sand at 6622 feet and drilled in the pay to 6650 feet. After setting 7-inch casing at 6638 feet, the well was given a production test which showed 33 barrels per hour with a tubing pressure of 1600 pounds; casing pressure 2500 pounds. This well makes the third producer for the Jeanerette field.

The same operator's Carter 1, which was thought to have discovered a new sand the previous week, was given a production test and showed 60 percent salt water. Screen has been pulled and the well will drill to the deep sand at 7490 feet. Previously, the operators had set 7-inch casing at 6748 feet in sands, which showed oil on a drill stem test. The drill stem test was made from 6741 to 6769 feet and showed 66 stands of 30 gravity oil through two ¼-inch chokes. Carter 1 does not condemn this new sand and it will be developed in the future. The test is 1208 feet east of Roane 2, in Section 38-13s-9e.

Herton Oil Company's Roane 3, Section 40-13s-9e, is slated to be the fourth producer for the field. At the end of the week the well was waiting on cement to set after topping the Roane sand at 6668 feet and drilling in the formation to 6688 feet.

The sixth producer for the Lafitte field, Jefferson Parish, was brought in April 14, and extended the producing limits of the field approximately 1000 feet southeast. The Texas Company's Rigolette 3, Section 29-17s-24e, was completed at 9453 feet in oil sand.

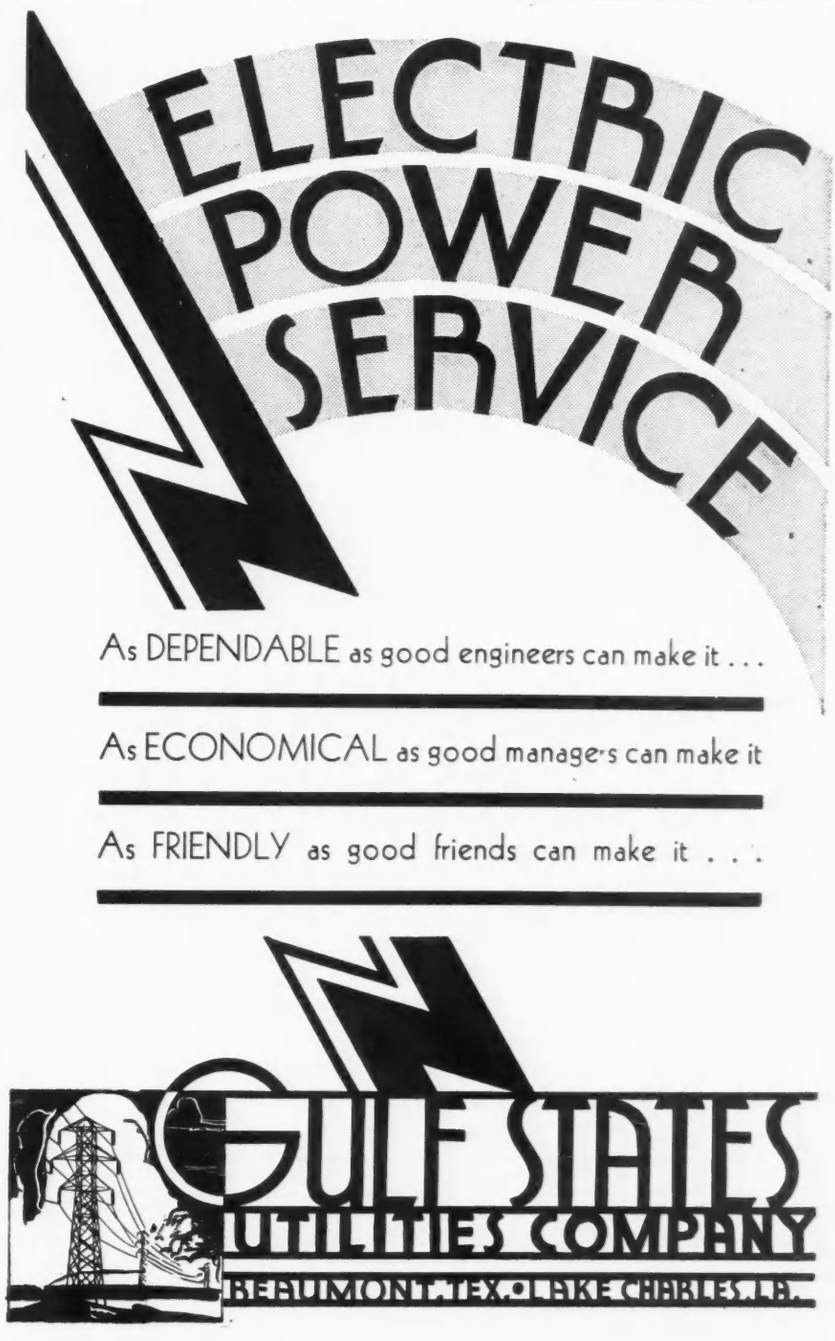
The extension test topped the oil sand at 9437 feet and 7⅝-inch casing was set with 1000 sacks of cement. After washing the well it responded and started flowing at the rate of 1600 barrels daily through a ⅜-inch choke with a tubing pressure of 1500 pounds.

Tide Water Oil Company's Smedes 2, 660 feet south and west of the discovery well, Section 57-11s-6e, St. Martinville field, St. Martin Parish, proved disappointing last week when casing was perforated from 7385 to 7395 feet with 10 holes. A drill stem test showed 53 stands of salt water and three of mud through a 7/32-inch choke on bottom and a ¼-inch choke on top. The well has been plugged back and will be perforated between 6823 to 6833 feet. At this depth it had a good showing of oil and stands a good chance of becoming a commercial producer. If the well does produce oil in commercial quantities from this depth it will be a new producing horizon for the field and will give added possibilities for the St. Martinville field.

A production test was given Southern Oil Company's State 1, Bayou Bouillon field, Section 13-9s-8w, Iberville Parish, last week and the well flowed 150 barrels in two days and then sanded up. Casing was perforated at 3010 to 3050 feet with 110 shots. It started flowing by heads and built up a pressure of 450 pounds on the tubing and 200 pounds on the casing. The tubing was lowered 200 feet off bottom. It started flowing oil and then sanded up. The well made 150 barrels in two days. At the end of the week operators were preparing to perforate casing again between 2957 to 2965 feet.

Another producer was added to the Tepetate field, Acadia Parish, during the past week when Continental Oil Company completed Homeseekers 2, Section 29-7s-2w, for 214 barrels in 15 hours from 8322 feet. The company set 5¾-inch casing at 8322 feet and washed the well in through a ¼-inch choke with a tubing pressure of 1200 pounds; casing pressure 1500 pounds. The oil tested 32.8 gravity.

Shell Petroleum Corporation's Colon-



ELECTRIC
POWER
SERVICE
As DEPENDABLE as good engineers can make it . . .
As ECONOMICAL as good managers can make it
As FRIENDLY as good friends can make it . . .
GULF STATES
UTILITIES COMPANY
BEAUMONT, TEX. • LAKE CHARLES, LA.

ial Sugar Company 1, Section 5-12s-5e, Convent prospect, St. James Parish, was preparing to take another drill stem test at 6383 feet after attempting two previous tests that failed. The wildcat had a faint odor of oil in sands at 6370 feet. An attempted drill stem test from 6355 to 6383 feet was made through a ⅜-inch choke on top and bottom. The seat gave way and about 6 feet held about 1½ minutes. In this time the operators recovered 7 stands of mud.

J. K. Lewis abandoned Lock Moore 1 on the Lock Moore prospect, Section 32-7s-6w, Jefferson Davis Parish, last week at 7095 feet after running an electrical logging device to 7027 feet which failed to show anything. Lewis encountered considerable trouble while drilling to 7095 feet. At 6046 feet a fishing job forced him to plug back. The derrick was pulled in and a heavier rig was moved in. At 5580 feet cement failed to hold and the hole was again plugged back to 5394 feet. Lock Moore 1 cored a dry sand from 6666 to 6671 feet. The wildcat topped the Heterostegina at 6195 feet.

Jefferson Lake Oil Company's Lake Pigneur 274, Jefferson Island Dome, township 12 south, range 5 east, Iberia Parish, has been plugged back again to 8133 feet and will perforate casing around 7405 feet. This sand is reported to be oil sand and made a good showing on an electrical logging device. Last week the operators perforated from 8465 to 8466 feet. The well did not show anything encouraging and was plugged back to 7400-foot sand.

East Feliciana Oil Corporation has made location for a wildcat in East Feliciana Parish, Rider 1, is 12.100 feet south and 3000 feet west of the northeast corner Section 54-1s-1w.

Union Sulphur Company has announced location for Green Acres 1, western extension test to the Gillis field, Calcasieu Parish. The semi-wildcat is 330 feet south and 330 feet west of the northeast corner of the SW¼ of Section 11-9s-8w.

# *New Rodessa Starts*

## SEVEN NEW TESTS AND SIX COMPLETIONS LAST WEEK

WEEKLY STAFF REPORT

**Shreveport.**—Six new oil producers, bringing the total at Rodessa to 136, were completed last week in that field. Seven new locations were announced giving the field a total of 89 active operations including 64 tests drilling, four rigging up, three derricks and 19 active locations.

Completions during the last week were: R. W. Norton's Elder 1, Section 23-23n-16w, which flowed 64 barrels in 6½ hours through quarter-inch tubing choke with casing pressure 125 pounds and no tubing pressure taken, depth of 6045 feet; Haynes Production Company's Pitts B-2, NE SW 12-23n-16w, west offset to the north outpost well of the northeast part of the main field, flowing 80 barrels per hour through 1½-inch tubing choke at 6033 feet, with five-inch OD liner and 2½-inch tubing used, tubing pressure 250 pounds and casing pressure 800 pounds; M. H. Marr and associates' W. J. Hunter 3, Section 13-23n-16w, completed at 6047 feet for 30 barrels per hour through ½-inch tubing choke with tubing pressure 1500 pounds and casing pressure 1950 pounds; Bartex Pipe Line Company's Robinson 2, NE SE 18-23n-15w, completed at 6060 feet flowing 11 barrels per hour through 1/16-inch choke with tubing pressure 975 pounds and no casing pressure given; Haynes Production Company's Otwell 4, Section 15-23n-16w, completed at 6004 feet flowing 130 barrels per hour through 1½-inch tubing choke, with tubing pressure 650 pounds and casing pressure 800 pounds, and United Gas Public Service Company's Rodessa 11, Section 23-23n-16w, completed at 6013 feet flowing 42 barrels per hour through a half-inch tubing choke, two percent wash water, with tubing pressure 500 pounds and casing pressure 750 pounds, completed through 2⅞-inch tubing and five-inch OD liner.

The week's new locations are: Bartex Pipe Line Company's W. W. Adams 2, NW NW 17-23n-15w; Haynes Production Company's Caldwell 4, SW SE 12-23n-16w; United Gas Public Service Company's Rodessa 17, NE NE 22-23n-

## SOUTH LOUISIANA Completions

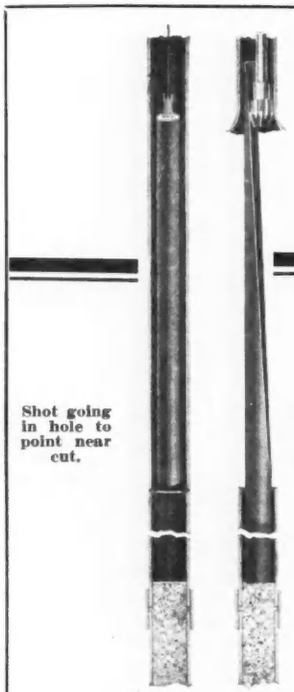
| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| CAILLOU ISLAND— | | |
| Texas Co., Caillou Island 35 | 1775 | 4647 |
| JEANERETTE— | | |
| Herton Oil Co., Banta 1 | 792 | 6650 |
| JENNINGS— | | |
| Reed Crude Oil Co., Clements 2 | 60 | 2079 |
| LEEVILLE— | | |
| Texas Co., L. L. E. Leeville 44 | 500 | 4097 |
| STARKS— | | |
| Tran-State Oil Co., Industrial Lbr. Co. 1 | * | 4297 |
| JEFFERSON DAVIS PARISH— | | |
| J. K. Lewis, Lock-Moore 1, Lock-Moore prospect, sec 32-7s-6w | * | 7095 |

*Failures; †Junked; ¶Million cu. ft. gas.

## NORTH LOUISIANA Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| BIENVILLE PARISH— | | |
| Lide & Greer, Davis Lbr. Co. 1, 12-16n-5w | ¶70¾ | 6144 |
| CADDO PARISH (Rodessa)— | | |
| Bartex Pipe Line Co., Robinson 2, 18-23n-15w | 5000 | 6060 |
| Haynes Prod. Co., Otwell 4, 15-23n-16w | 6000 | 6004 |
| Pitts B-2, 12-23n-16w | 5000 | 6033 |
| M. H. Marr et al, W. J. Hunter 3, 13-23n-16w | 4000 | 6047 |
| R. W. Norton, Elder 1, 23-23n-16w | 6000 | 6045 |
| United Gas, Rodessa 11, 23-23n-16w | 5000 | 6013 |
| MOREHOUSE PARISH (Monroe)— | | |
| Farrell & Co., State of La. 1, 4-20n-4e | ¶2¾ | 2145 |

*Failures; †Junked; ¶Million cu. ft. gas.

Shot going in hole to point near cut.

Ready to Sidetrack following the shot.

The Newest and Simplest SIDETRACKING METHOD

This revolutionary method of shooting the window for drilling out of casing is rapidly proving its time and money-saving results to operators. Regardless of the size of pipe, the depth or the temperature, it is highly successful, job for job. You will sidetrack a lot of trouble and undue expense while you're sidetracking by this method with an H.&L. Expert Shooting Crew.

HALL & LOWREY INCORPORATED
PHONES: OFFICE 222—NIGHT 122—354
GOOSE CREEK, TEXAS, U.S.A.

M. C. WOMACK (Phone 89) Thibodeaux, La.

16w; Rodessa 22, NWc 15-23n-16w, south offset to Haynes Production Company's S. G. Zylks 1; J. E. McCoy 1, NEc 16-23n-16w, south offset to Haynes' O. A. Zylks 1; M. L. Harris 2, NE NE 15-23n-16w; and United Production Corporation's J. T. Stewart Unit 1, John Collum Survey, Cass County, Texas.

Following is the status of tests drilling on the Cass County part of Rodessa: American Liberty Oil Company's D. A. Maxie 2, John Collum Survey, drilling 1425 feet; D. A. Maxie 3, same survey, rigging; Marcus Rambo 1, J. H. Rives Survey, drilling 4725 feet; McElvain and Beckett's Maxie 1, B. J. Murray Survey, moving in rig; R. W. Norton's Heywood 2, Priscilla Evans Survey, spudded, set surface casing; Rives 2, John Collum Survey, drilling 5345 feet; The Texas Company's E. E. Hall 1, James Young Survey, location; United Gas Public Service Company's Eva Fields 1, John Collum Survey; derrick; Eva Fields 2, same survey, location; and J. T. Stewart Unit 1, location cleared.

Pipe line runs from the field for three days last week were: 44,380 barrels from 131 wells; 44,981 barrels from 132 wells; and 44,576 barrels from 132 wells.

Louisiana officials are reported to have refused permission to Eastern Texas Pipe Line Company, which is taking the oil from American Liberty Oil Company's D. A. Maxie 1, John Collum Survey, Cass County, to its Rodessa pumping station on the Louisiana side of the line to prevent mixing it with Louisiana produced Rodessa crude. This necessitates taking the oil from the Cass County well directly into its main line. Tax employes of Louisiana are reported gauging all oil from Pelican Oil & Gasoline Company's Sexton lease in Section 14-23n-16w, which was the center of controversy for movement in interstate commerce by East Texas Pipe Line Company recently, before it enters the pipe line.

It is reported that plans of Black Bayou Oil Company to secure a lease on the bed of Black Bayou in Section 21-23n-16w, Caddo Parish, for a number of wells have been abandoned.

## CHENEYVILLE WELL

**Alexandria.**—The fourth oil well for the Cheneyville-Bunkie field, Rapides Parish, central Louisiana, appeared assured last week after The Texas Company's Weil 2, Section 53-1n-2e, tested 750 feet of oil through a quarter-inch choke with 100 pounds gas pressure in a 10-minute drill stem test at 5737-57 feet. It is a west offset to Amerada Petroleum Corporation's Weil 2 in the same section. Production figures last week on the three producers in this field were: Amerada's Weil 1, flowing 168 barrels daily through 25/64-inch choke; Weil 2, flowing 119 barrels daily through 13/64-inch choke; and Beasley 1, flowing 167 barrels daily through 22/64-inch choke.

---

**HUGH McCREA,** chief storekeeper for Trinidad Leaseholds, Limited, arrived in New York from Trinidad recently and will stay in the States long enough to attend the exposition in Tulsa next month.

# *Leasing Is Active*

## BLOCKING CONTINUES BRISK IN NORTH LOUISIANA

**Shreveport.**—Lide & Greer is planning to go at least 6400 feet in Simmie Gardner 1, Section 10-17n-4w, Lincoln Parish, five-eighths of a mile north of their Fowler 1 in the same section completed at 5300 feet to open a new saturated gas field in the Glen Rose.

Lide and Greer have moved their rig back to Simmie Gardner 1 after completing Davis Lumber Company 1, Section 12-16n-5w, Bienville Parish, at 5870 feet as a 70,750,000 cubic foot gasser and last week were drilling in massive anhydrite below 4800 feet. They own the oil rights on both the Lincoln Parish and Bienville Parish blocks.

Texas-Seaboard Oil Corporation, who recently abandoned a 6000-foot test in Section 3-16n-6w, Bienville Parish, has rechecked, reshot and remapped that area but no immediate new test is planned. Arkansas-Louisiana Gas Company added the oil rights on 400 acres on which it had previously bought the gas rights in an area around Section 2-16n-5w, Bienville Parish. In the same parish in township 18 north, range 6 west, Standard Oil Company of Louisiana is adding to the 11,000-acre block it recently assembled at a cost of $175,000. Hunter Company, The Texas Company and Gulf Oil Corporation are all taking leases in the general area. Gulf Oil Corporation is also buying in township 14 north, range 8 west, and in township 15 north, range 7 west, where Sun Oil Company recently acquired several hundred acres. Arkansas-Louisiana Gas Company has a shooting crew in township 14 north, range 7 west. Bert White is leasing in township 17 north, range 7 west.

It is reported that Gulf Oil Corporation plans a 5500-foot test to spud before next August 1 on acreage it has leased in township 17 north, range 15 west, Caddo Parish, near the hamlet of Flournoy. In Caldwell Parish, Sun Oil Company is leasing in townships 13, 14 and 15 north, ranges 4 and 5 east.

In DeSoto Parish, Ohio Oil Company and Gulf Oil Corporation have geophysical crews at work, the former having a shooting unit in township 11 north, range 14 west and the latter having a seismograph crew in township 12 north, ranges 10 and 11 west. Some scattered leasing is still going on in Jackson Parish by Sun Oil Company in townships 15 and 16 north, range 1 east.

In Lincoln Parish, Standard Oil Com-


**Beans, for instance!**

We doubt if we would do any good selling ordinary merchandise to laymen. Beans, for instance. A bean is a bean, and how the deuce are you going to sell a better bean than your competitor? Fancy offering a scientifically prepared and properly heat-treated bean—even if Campbell does go in for it! But in handling everything for drilling and producing wells, we deal in stuff where there is a big difference in quality, and with men who know the difference. And we play ball with the boys who want the best, being careful not to be unexpectedly ambidextrous.

**PELICAN**

**WELL TOOL & SUPPLY COMPANY**

SHREVEPORT, LOUISIANA

Lake Charles—Houma—Converse
Rodessa—Monroe—Kilgore
Greggton

MORE THAN
2,000,000
STROKES

**AND STILL IN SERVICE WHEN THE PHOTOGRAPH WAS TAKEN**

• The original Lamb Piston unquestionably is superior, due to its Meehanite Core, hand built construction, and special rubber compound. We can make these claims freely because of its performance records, which are conclusive evidence of its superiority. We know what it will do . . . let us prove it to you.

The uniformly satisfactory performance of Lamb Pistons enables us to accept, without the slightest apprehension, full responsibility for a demonstration in your own pumps under certain conditions. Return the attached coupon and we will refund the postage.

LAMB PISTON
SALES COMPANY
1103 BORDER AVENUE, P.O. BOX 144
TORRANCE :: :: CALIFORNIA

I am calling your hand. Send FULL particulars of your Lamb solid Piston. Tell us why it is better and will save us real money. Prove to me that it is better

MY NAME _____
NAME OF COMPANY _____
CITY & STATE _____

pany of Louisiana has completed a seismic survey around Arkansas-Louisiana Gas Company's block centering in Section 32-19n-2w, where the latter company is drilling a deep test at present close 4600 feet with no porosity yet encountered. In Ouachita Parish, Southern Carbon Company has taken a 5000-acre block in township 17 north, range 4 east, with a drilling obligation to spud a 5500-foot test by September 1. Gulf Oil Corporation is buying scattered leases in township 16 north, range 1 east. After an area around Section 7-16n-4e, was shot, a location made in that section has been abandoned.

In Red River Parish, I. J. Allen of El Dorado, Arkansas, has taken a shooting option on 5000 acres centering around Section 15-11n-9w, on which he will spud a 3000-foot test before May 10. In the same parish, Texas-Seaboard Oil Corporation has a seismograph unit working in township 13 north, range 9 west. In Union Parish, Standard Oil Company of Louisiana has a shooting unit working around Section 5-20n-1e. In Winn Parish, Shell Oil Corporation has a seismograph crew working in township 12 north, range 2 west, where it recently took some acreage. Gulf Oil Corporation which has approximately 20,000 acres in Winn Parish is still adding to its holdings in that parish.

## CASS LEASING

**Shreveport.** — Between Forest and Marietta, northwest of Linden, county seat of Cass County, Texas, and centering around the J. Syles Survey, Gulf Oil Corporation has leased approximately 6000 acres. In the same area Magnolia Petroleum Company, Hunt Production Company, and Republic Production Company are taking considerable acreage. Along the southwest trend of the Rodessa Fault and south of Lodi, Atlantic Oil Producing Company has a seismograph unit at work.

## GASOLINE PLANT

**Shreveport.**—M. H. Marr and D. L. Perkins have announced plans for a gasoline plant of the absorption type in the Rodessa field, to be located in Section 13-23n-16w. The plant will have a daily capacity of 6000 gallons and 15 million cubic feet of gas daily and will cost approximately $190,000. Due to the high gas-oil ratio at Rodessa it is expected that other plants of this type will be erected. Practically all oil wells at Rodessa make from one to five million and more feet of gas daily along with the oil.

## SOUTHEASTERN STATES
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **FLORIDA** | | |
| HILLSBOROUGH COUNTY— | | |
| Southern Pet. Co., Mizell & Williams 1, 4-32s-21e ..... | † | 2625 |

*Failures; †Junked; ¶Million cu. ft. gas.

## LOUISIANA PERMITS

**Shreveport.**—Thirty-five drilling permits were issued last week by the minerals division, Louisiana Conservation Commission. Of these 17 were for North Louisiana parishes divided among the following parishes: Caddo, 13, all in Rodessa; Red River, 1; Sabine, 2, and Union, 1. Those in South Louisiana were divided among the following parishes: Acadia, 2; Calcasieu, 2; Cameron, 3; Iberia, 5; Plaquemines, 1, and Terrebonne, 5.

## ARKANSAS PERMITS

**El Dorado, Ark.**—Three drilling permits were authorized last week by the Arkansas Board of Conservation, as follows: Miller County, Arkanva Oil Corporation, El Dorado, E. L. Beck B-3, located 360 feet east and 188 feet south NWc south half SE SE 33-15-26; Union County—Marine Oil Company, El Dorado, M. H. Simmons 4, located 250 feet west and south NEc SE NW 10-18-13; Burharal Oil Corporation, El Dorado, Pumphrey 1, located 360 feet north and 280 feet west SEc NE NE 11-17-14.

## SANDY LIME BELT
### Continues to attract New Mexico operators

NEW MEXICO — WEEKLY STAFF REPORT

**Hobbs, N. M.**—The sandy-lime belt in eastern Lea County was assigned five of the 12 new locations authorized for the county last week. Four majors are starting operations on their first tests in the former area, and if successful in developing commercial production will be less inclined to farm out this type of acreage as they have been in the past.

Territory north and south of Eunice constitutes the most active drilling center in the sandy-lime belt, while a number of semi-wildcats situated northeast of Jal are approaching decisive depths.

Magnolia Petroleum Company has awarded contract for drilling Will Cary 1, C NE SE 21-22s-37e, a west offset to N. G. Penrose and Rowan-Nichols Oil Company's Will Cary-Humble 1, original oil producer for the area. Tide Water Oil Company's Anna Walden 1, C SE NE 21-22s-37e, is a north offset to the former test.

Humble Oil & Refining Company is starting operations on W. B. Farrell 1, C SW SE 22-22s-37e, an east offset to production, while Penrose and Rowan-Nichols Oil Company has erected rotary to drill Will Cary-Humble 3, C SE NW 22-22s-37e. The latter has adopted a policy of using rotary in drilling to top of salt section, where 8-inch casing is cemented, and then

switching to cable tools. Drilling costs are reduced about $5000 per well, according to reports, through the use of combination tools.

Gulf Oil Corporation's Eunice A. King 1, C SW NW 28-21s-37e, has been ordered drilled as an east offset to Barnsdall Oil Company's recently completed wildcat producer north of Eunice. Ohio Oil Company recently started work on a south offset to the producer.

The northeast Jal sandy-lime area received a setback the past week when Plains Production Company's R. L. Mosley-Repollo 1, C NW SE 34-24s-37e, encountered sulphur water at 3550 feet, with an elevation of 3168 feet after passing up minor oil showings with gas. It will likely be plugged back and shot, with assurance of making a small gasser, as the production gauged 2,360,000 cubic feet of gas daily at 3355 feet. The same company's Geo. Smith-Humble 1, C SE SE 4-25s-37e, was drilling near the 3100-foot level, according to late reports, with an elevation of 3174 feet. Harry W. Leonard et al's B. T. Lanehart-Humble 1, C SW NE 21-25s-37e, passed up 17,800,000 feet of dry gas at 2975 feet, and at 2979 feet, or 100 feet above sea level, tested about 5 million cubic feet of gas and about 25 barrels oil daily. Operations were temporarily halted to rig up a separator. The Texas Company's Lanehart 1, C NE 29-25s-37e, landed 7-inch pipe at 2460 feet to handle 20,000,000 feet of dry gas, and was drilling at 2640 feet, according to late reports.

Progress was made the past week by Culberson, Erwin and Stovall in dislodging two strings of tools lost in J. R. Stuart-Repollo 1, C SW SE 10-25s-37e, late in March when oil and gas pay was encountered at 3280-3294 feet, with an elevation of 3105 feet. The well is rated at 50 barrels daily with junk in the hole. The partnership's J. B. Humphrey-Humble 1, C SE SW 3-25s-37e, was preparing to drill deeper after logging first oil show at 3266 feet. It has an elevation of 3135 feet.

Three more tests for the Monument field have been started by Amerada Petroleum Corporation. These include L. M. Lambert 1, C NW NE 6-20s-37e; State 1-S, C SE SW 2-20s-36e; and State 3-O, C SE NE 30-19s-37e. A fourth location announced last week involved The Texas Company's J. R. Phillips 3, C SW NW 6-20s-37e. Amerada Petroleum Corporation's State 1-O, C NW NE 30-19s-37e, ranked among the largest producers for the week, having gauged 129 barrels per hour of natural flow through tubing from lime at 3975 feet. The same company's H. Culp 1, SW SW SE 31-19s-37e, gauged 385 barrels in 4½ hours through open tubing after using 2000 gallons of acid at 3890 feet.

New tests for Eunice field have been below normal for several weeks. There were only three new locations listed the past week. These included Gulf Oil Corporation's Orcutt 4, C Lot 12, 5-21s-36e; Humble Oil & Refining Company's Adkins 4, near C NW SW 10-21s-36e; and Devonian Oil Company's State-Heasley 4, C Lot 5, 5-21s-36e. The latter company's State-Heasley 3, C Lot 1, tested 6 barrels hourly on 1-inch tubing choke from lime at 3859 feet, or 303 feet sub sea. It is located on the north line of production.

# *New Colorada Field*

## 50 BARRELS HOUR FLOW REPORTED IN PARK COUNTY

ROCKY MOUNTAIN FIELDS

WEEKLY STAFF REPORT

**Denver, Colo.**—Colorado came back into the limelight of the oil picture this week with a new oil field and three wildcat tests staked in the eastern part of the state.

Three Mile Dome, on Hartsel anticline, Park County, southwestern Colorado, is the new oil field. South Park Oil Company's State 1, SE SE SW 16-11s-75w, will make 50 barrels oil an hour according to C. E. Shoenfelt, petroleum geologist, Denver. Oil is coming from the Apache Creek member of the Pierre shale. Hole bottoms at 4157 feet.

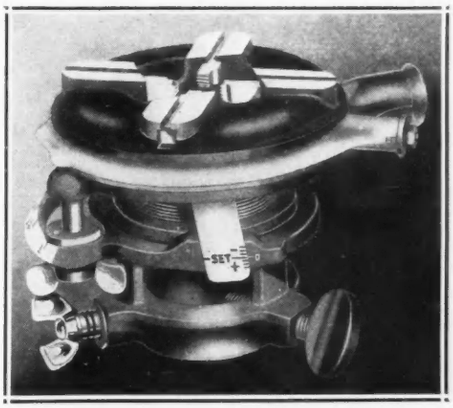
With the completion of State 1, South Park Oil Company plans to drill a deep test on the South Dome of Hartsel anticline. This test will start in the Pierre shale about 1900 feet below the top of the formation and the Cretaceous series is expected at around 3200 feet.

Starting the present play to secure oil production in the eastern part of Colorado was seen this week with the Indian Territory Illumination Company releasing location for two tests while Continental Oil Company spotted a location.

Continental Oil Company's test in the New Raymer-Buckingham district, Weld County, CSW NE 28-8n-59e, is moving in rotary equipment. The test is located 3 miles west and a quarter-mile south of the company's Anthes 1, CNE NE 24-8n-59e, which was drilled in 1933, and abandoned. Anthes 1 found water in the Dakota at 6637-6658 feet and cores from the Muddy at 6527-6555 feet showed 7 feet of gas sand.

Just a few miles from the Kansas line, Indian Territory Illuminating


**The BEAVER "12-R"**




**This "one piece" tool (no loose parts) is splendidly adapted to the severe service of oil fields because:**

**(1) It is well encased and amply protected against getting clogged up with sand and dirt.**

**(2) It is made of Air Furnace Malleable Iron—a strong "live" metal that has been standard in time-tested pipe tools for 30 or 40 years.**

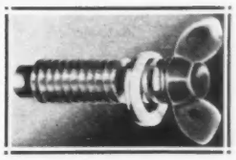
**(3) It is entirely self-contained—no separate parts to get mislaid when most needed.**

**(4) It is fully adjustable for oversize or undersize threads.**

**(5) The ratchet pull is directly on the diehead which facilitates easy pulling.**

**(6) Finally, it has the simplest and best centering device—with no mechanism to get out of order. Just a plain grooved bolt and washer—one of many BEAVER patents.**

**Moderate in weight (19 lbs.) and price ($15). Threads 1, 1¼, 1½ and 2-inch pipe. A complete tool—all in one piece! Ask for the BEAVER "12-R".**



*At all Leading Supply Houses.*

**BEAVER PIPE TOOLS**

**400 WEEKS AVE.** *The Quality Line—Since 1900* **WARREN, OHIO**

Company released location in the CNW SW 21-2s-43e, on the Beecher Island block in Yuma County. In the past wells have been drilled in this area making as high as 3,000,000 cubic feet of gas daily but failed to hold up in pressure.

Indian Territory Illuminating Company released its other location in the Hyde block in Washington County, CNE NE 28-1s-49e.

Eastern Colorado first came into prominence 5 years ago when oil was discovered at Greasewood. Since that time extensive leasing campaigns have been carried on by several of the major oil companies with the result that 3,000,000 acre have been blanketed under oil leases.

It is expected that a number of additional majors and independent operators that have not entered the field as yet will become active in Eastern Colorado development in 1936. At present there are about 20 blocks of leases in this area to justify the drilling of test wells. W. O. Rennie, Denver geologist, is reported to have leased a block of 12,000 acres in eastern Kiowa County. Another well to be drilled shortly according to late reports will go down on the Buckeye lease, held by Continental Oil Company, on the Wellington structure in Larimer County.

Eastern Colorado has been the scene of extensive exploration and seismic surveys during the past year. A list of the major companies and independents now actively interested in the area with the amount of their acreage is given as follows: Gypsy Oil Company, 1,297,000; The Texas Company, 460,000; Magnolia Petroleum Company, 180,000 acres; Indian Territory Illuminating Oil Company, 171,000 acres; Continental Oil Company, 98,000 acres; Carter Oil Company, 80,000 acres; Ramsey Oil Company, 71,000 acres; Ohio Oil Company, 42,000 acres; Sierra Grande Oil Company, 38,000 acres; Plains Exploration Company, 34,000 acres; The California Company, 32,000 acres; Stanolind Oil & Gas Company, 16,000 acres; and miscellaneous, 500,000 acres. This brings the total for oil leases to 3,019,000 acres.

## MOUNTAIN STATES

### Completions

| Company, Wel and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **MONTANA** | | |
| GLACIER COUNTY (Cut Bank Field)— | | |
| Santa Rita Oil & Gas Co., Tribal 6, cnw sw 15-35n-6w | 60 | 2938 |
| Texas Co., Fee 5, csw sw 15-35n-6w | 50 | 2900 |
| **NEW MEXICO** | | |
| EDDY COUNTY (Artesia Field)— | | |
| Flynn, Welch & Yates, State 73, cnw ne 10-19s-28e | 20 | 2149 |
| LEA COUNTY (Monument Field)— | | |
| Amerada, H. Culp 1, sw sw se 31-19s-37e | 2500 | 3890 |
| State 3-J, c ne sw 2-20s-36e | 600 | 3930 |
| State 1-O, c nw ne 3-19s-37e | 5000 | 3975 |
| Conoco, State 1-C-30, c ne nw 30-19s-37e | 5000 | 3970 |

*Failures; †Junked; ¶Million cu. ft. gas.

## WYOMING

**Casper, Wyo.**—A completion for Argo Oil Company in the Lance Creek field, in Niobrara County, and a good well near completion for Ohio Oil Company in the Rock River field, Carbon County, were recorded in Wyoming oil fields this week.

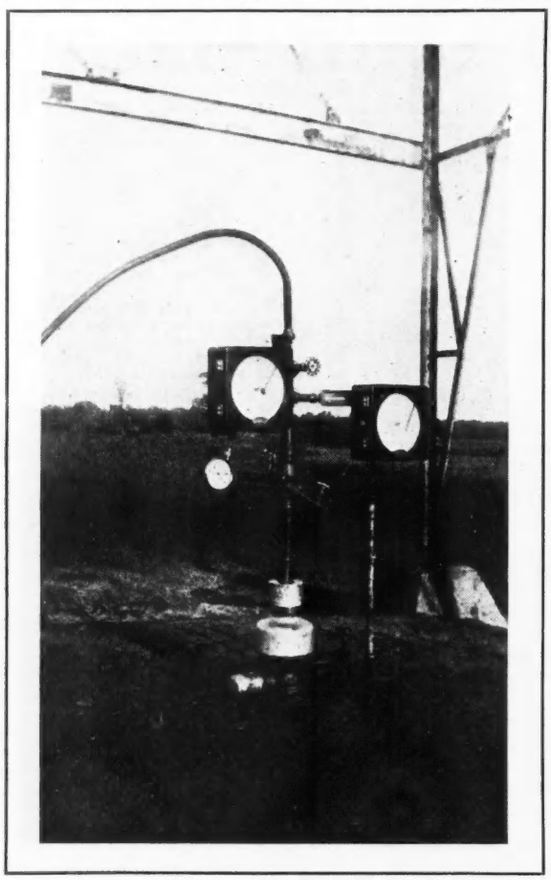
Argo Oil Company's Elliott 6, CSE NW 5-35n-65w, in the Lance Creek field, is flowing at the rate of 2600 barrels oil daily through the 7-inch production casing cemented at 3864 feet. The flow will be materially increased when the 2½-inch tubing is run. The well is making 3,000,000 cubic feet of gas daily with the oil. Total depth is at 3942 feet in the Sundance horizon which is topped at 3866 feet.

Ohio Oil Company has a well nearing critical depth in the Lance Creek field. Agnes Rohlff 3, SW SE NE 32-36n-65w, a northeast outpost, is drilling at 3523 feet.

Argo Oil Company's Elliott 7, CNE SW 5-36n-65w, Lance Creek, is drilling at 3057 feet.

Another good completion for Ohio Oil Company is expected in State 1, SEc NE 34-20n-78w, in the Rock River field, Carbon County, south central Wyoming, which swabbed 418 barrels of oil in the first 14 hours. Hole bottoms at 3290 feet with the 4¾-inch liner set at 3220 feet. Operators are rigging up pumping equipment for the well.

The company's Harrison-Cooper 9,

*At left is shown a GPI hook-up on a major company well in East Texas. By reducing the gas-oil ratio, water-oil ratio and operating pressures, this flow system is greatly reducing total lifting costs and extending the producing life of the well.*

The Industry's
MOST MODERN METHOD
of flowing Wells

GPI SYSTEM

This patented system of flowing wells is now on exhibit at the Houston Oil Show, presented in model form for your convenience. The model, 19 feet high, is equipped with glass casing and transparent tubing and valves. Any production man, on visiting this display, can readily understand the operating principle and see the advantages afforded by this, the Industry's Most Modern Well Flowing Method.

This same GPI exhibit will be operating at the Tulsa Exposition, May 16-23, under the direction of GPI Engineers who will welcome your visit.

Gas Power-Incorporated

Houston GPI SYSTEM Texas

SEc 35-20n-78w, in the same field, is drilling at 3098 feet while Alvy Dixon 1, NEc SE 34-20n-78w, is rigging up.

On Big Medicine Bow field, Carbon County, Ohio Oil Company's operations report routine. Union-Pacific Johnson 3, CNE SE 23-21n-79w, is drilling at 500 feet. Union Pacific-California 2, CNE NE 35-21n-79w, is drilling at 2164 feet.

Ohio Oil Company is preparing to complete another well this week in the Byron field, Big Horn County, northern Wyoming. Byron-Union 4, CSW NE 25-56n-97w, is at 5714 feet. It drilled to 5735 feet where it developed water in the bottom of the Tensleep horizon. Robert Till 1, CSE SW 24-56n-97w, is drilling at 2452 feet. Orson Vail 1, CNW NE 23-56n-97w, has rig up in the Byron field.

## MONTANA

**Cut Bank, Mont.**—Third and north offset to Santa Rita Oil & Gas Company's Landers 1 well found the Sunburst sand dry in the But Bank field, near here, Glacier County, northern Montana this week. Santa Rita Oil & Gas Company's Tribal 7, SW SE 16-35n-6w, had the Sunburst horizon at 2830-40 feet and recovered core revealed no oil. It is being drilled in the Cut Bank sand at 2949 feet where 5 feet of saturation has been found and will be completed in this horizon.

Work in the field continually gets better as 4 wells completed and 6 new locations were spotted. Nadeau Brothers' Tribal 1, NW NW 6-32n-5w, swabbed 5 barrels of oil an hour at 3017 feet. The saturated Cut Bank sand was found between 3001 and 3015 feet.

Montana Power Gas Company had 2 completions this week, an oil well and a dry hole. Coburn 2, NW NE 8-33n-5w, will make a 50-barrel well with bottom at 2818 feet. The Cut Bank sand was found at 2787-2817 feet. Eisler 1, NE SW SE 5-33n-5w, abandoned at 2795 feet.

Santa Rita Oil & Gas Company's Corey 1, NW SW 5-32n-5w, will be drilled in with a spudder. Oil rose 500 feet in the hole and the total depth is at 2965 feet.

## CALIFORNIA

### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| FRUITVALE— | | |
| S & G Oil Co., Gladys-Nichels 1 | 225 | 3490 |
| KERN FRONT— | | |
| Republic Pet. Co., Strassburger 7 | 310 | 2100 |
| DOMINGUEZ— | | |
| Union, Callender 49 | 90 | 5418 |
| SANTA FE SPRINGS— | | |
| Union, Bell 95 | 40 | 5951 |
| LOS ANGELES COUNTY— | | |
| Sovereign Oil Co., Ben Long 1 | * | 8766 |
| MOUNTAIN VIEW— | | |
| Standard, Garcia 1 | * | 6078 |
| KETTLEMAN HILLS— | | |
| Petroleum Sec. Co., Burbank 1 | * | 9332 |
| Kettleman North Dome Assn., No. 54-26-Q | * | 8397 |
| KERN COUNTY— | | |
| Superior, B. V. A. 1 | * | 4880 |

*Failures; †Junked; ¶Million cu. ft. gas.

# Santa Barbara Wildcat

## POTENTIAL TEST FLOWS 2376 BARRELS DAILY

WEEKLY STAFF REPORT

**Los Angeles.**—Union Oil Company conducted a 24-hour potential test of Adam 1, Section 24-10n-34w, in which the well was credited with 2376 barrels a day of 16.4 gravity oil, 95 pounds tubing pressure, 140 pounds casing pressure and 400,000 cubic feet of gas. It was flowing through 2 1½-inch tubing beans and 1 60/64-inch casing bean. This wildcat project, 2 miles southeast of the town of Santa Maria, Santa Barbara County, was completed April 1, for an estimated sump flow of 3500 barrels a day. The well was bottomed at 2576 feet, with 8⅝-inch casing cemented at 2606 feet. Because of previous drilling in this area, the structure is thought to be pretty well defined. However, leasing is being done with no regard to caution. It is considered probable that the field will include the townlots of Santa Maria to the northwest of the Adam well. Union Oil Company is making preparations to drill its second test in this new area, Enos 1, section 19-10n-33w.

The Comanche Point district, extreme southern limit of the San Joaquin Valley, Kern County, is again being looked upon with favor among California operators. Long held as offering potential oil bearing possibilities, Comanche Point has been moderately tested during the past 20 years. Signal Oil & Gas Company is to drill on Rancho El Tejon, 2 miles southeast of Comanche Point. Ohio Oil Company will drill 300 feet north and 300 feet west from the center of Section 36-11n-19w.

San Joaquin County, already established as a producer of gas, is to receive an additional test with the drilling of Holly Development Company's well, which is to be located on its 52-acre Paddin Tract in Section 16-2s-15e.

Amerada Petroleum Corporation's F. D. L. 5, Section 15-2s-5e, was cored to 6160 feet and the lower zones were found to be wet. The well is being plugged to 4100 feet for a test of upper formations from 3900 feet to 4200 feet.

Between the Elk Hills oil field and the Buttonwillow gas field, Kern County, General Petroleum Corporation is drilling an important wildcat test in Section 5-30s-24e. It has been drilled to 6149 feet and 7-inch casing has been recemented at 6050 feet, following an unsuccessful water shut-off on the initial cement job. Showings of oil and gas have been encountered below 6050 feet.

Mohawk Oil Company is starting operations on Earl Fruit Company 1, NW NW 10-31s-29e. This test is 1 mile south of the southern limits of the Mountain View field.

The Maricopa Flats field of Kern County is to receive an interesting test within the next few days. General Petroleum Corporation's Main Line 1, Section 6-11n-23w, is bottomed at 2724 feet and 8⅝-inch casing is cemented at 2658 feet. This well offsets Gibson Oil Company's O'Brien 1, which was completed March 4 for 1000 barrels a day and will be the first competitive company to test the sands from which O'Brien 1 obtains its production.

The Shell Oil Company is entering this area and is preparing to drill Dorsey & Flack 1, NEc 6-11n-23w.

The Texas Company's Eureka 2, far northern test in Humboldt County, Section 22-3-1, has been drilled to 4375 feet, at which point operators are trying to loosen frozen drill pipe. Strong gas showings have been encountered.

### Testing Deep Hole

Union Oil Company's Lillis Welch 1, Section 24-21-16, Eocene test of the North Dome area of Kettleman Hills, is conducting a series of tests after plugging and perforating the casing in stages. The hole had been drilled to 11,147 feet, with 6⅝-inch casing cemented at 10,813 feet. The present plug is at 10,722 and the casing is perforated 10,562-10,566 and 10,530-10,532 feet. After swabbing, the fluid rose 277 feet in three hours, all oil. Preparations are now being made to perforate higher.

Barnsdall Oil Company is drilling at 1100 feet in Wreden 1, Section 24-28s-17e, San Luis Obispo County. This is the initial test of the company's large holdings in this area and presages a drilling campaign of major importance. In acquiring 230,000 acres in the Carrizo Plains district, the leases are believed to embrace six major structures. Barnsdall Oil Company's seismograph parties are still at work on portions of this territory.

### Los Angeles Harbor Test

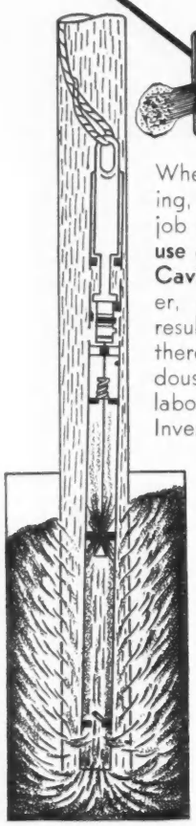
In the flat lands of Los Angeles Harbor, the General Petroleum Corporation is making preparations to drill Terminal 1, 470 feet southwesterly from the west line of Ford Street, measured along the Los Angeles-Long Beach boundary line, thence 150 feet northwesterly at right angles.

Albert Petroleum Company is rigging rotary on Chute 1, Lucerne Val-

For BAILING FISHING WASHING PERFORATIONS CLEANING-OUT there is Only ONE

PRACTICAL, EFFICIENT ECONOMICAL, SAFE AND DEPENDABLE PROCEDURE

—THE CAVINS



When you have a bailing, fishing or cleanout job **you can't afford to use any method but The Cavins** because it is faster, easier, gets better results in less time, and therefore saves tremendous amounts in time, labor and production. Investigate now to be prepared when the need is urgent. Will save you thousands of dollars. Complete descriptive folder No. 36 sent on request.

***Illustrating how the tremendous suction created by The Cavins pulls sand and junk into the load chamber.***

THE CAVINS COMPANY

Long Beach, Calif., 2853 Cherry Ave. . Phone 414-14
Cable Address: "Cavins, Long Beach"
Foreign Representative: R. J. Eiche
Bakersfield, Calif., 3800 Chester Ave. . Phone 1779-J
Taft, Calif., 200 Center St. . . . . Phone 78
Houston, Texas . . . . . Phone Wayside 1451
Kilgore, Texas . . . . . Phone 753
Pampa, Texas . . . . . Phone 1220
Oklahoma City, Okla. . . . . Phone 3-6441
Wichita, Kansas . . . . . Phone 45-449
Lyons, Kansas . . . . . Phone 227
Ventura, Calif. . . . . Phone 4008


ley wildcat test, NE NE 14-4n-1w, San Bernardino County. This well will be drilled in the area of the Box "S" Ranch. It is understood that 7000 acres have been acquired by this company. Production is expected from the Miocene section.

Republic Petroleum Company's El Segundo 2, Section 18-3s-14w, is coring at 7454 feet in conglomeratic oil sand, encountered at 7407 feet; top of the Nodular shale was cored at 7225 feet.

An eastern extension of the East Coyote field has been in part disproven by the drilling of Continental Oil Company's Carlton Community 1, Section 21-3s-9w. The hole was drilled to 4796 feet (Miocene) and has been plugged back to 2492 feet and 8⅝-inch casing is standing cemented at 2420 feet in preparation for a test of upper showings in the Pliocene formation.

Ohio Oil Company has drilled Recreation Gun Club 18, Section 22-2s-15w, to 6380 feet, and 6⅝-inch casing is cemented at 6298 feet. A successful completion of this project would add considerably to the proven acreage already held in the Venice field by its discoverer, Ohio Oil Company.

Shell Oil Company is coring McKenna 1, wildcat in Section 33-3s-14w, north of the Torrance field, at 7220 feet in hard oil sand and shale. Good ditch showings of gas have also been noted. Much importance is attached to this test, as it will definitely prove or disprove the presence of oil in the deep schist formation in this area of the Los Angeles basin. McKenna 1 originally was drilled by Pioneer Holding Company to 4200 feet. Shell Oil Company took over and deepened from that point.

Eyer Petroleum Corporation's Well 1, wildcat test in Section 20-4s-13w, east of the Torrance field, total depth 3794 feet, with 8⅝-inch casing cemented at 3608 feet, tested wet on production test and the 8⅝-inch casing is standing recemented. Leasing surrounding this project has been for the most part of town lot variety, and a successful completion would mean a closely drilled campaign.

20th Century Oil Company's Calnan 1, eastern extension test of the Huntington Beach field, continues pumping 120 barrels of oil a day, cutting 25.0 percent. The well was completed April 2, after being drilled to 5160 feet and plugged to 4500 feet.

Barnsdall Oil Company's Bell 12, Eocene test of the Elwood field, Santa Barbara County, has been drilled to 8506 feet. The loss of drill pipe has temporarily delayed the progress of this test.

El Rancho Oil Company, Section 9-3-19, Ventura County, was unsuccessful in its initial attempt to complete its exploratory well of the Bardsdale field. Drilled to 4041 feet, in Sespe sands and shales, with 9⅝-inch casing cemented at 3998 feet, it was swabbed through 2-inch tubing and was wet. Operators are now determining the entrance of the water before further testing.

Union Oil Company's Dryden 1, Section 12-3-20, deep test of the Bardsdale field, Ventura County, has been drilled to 6055 feet, with 8⅝-inch casing cemented at 5250 feet, and is being swabbed.

## GRAND RAPIDS GAS

### Michigan commission limits field withdrawals

MICHIGAN

WEEKLY STAFF REPORT

**Mt. Pleasant, Mich.**—Grand Rapids Gas & Light Company was granted an order by the Michigan Public Utilities Commission permitting construction of a gas pipe line from the Tri-township field of Mecosta and Montcalm Counties to Grand Rapids but the order limits withdrawal of gas to not more than 50 percent of the Grand Rapids requirements on a mixed basis.

The original application of Grand Rapids Gas & Light Company asked for a pipe line permit on a 50-50 natural and artificial mix basis but it later was amended to call for straight natural gas. The later request was denied.

Denial of the company the right to draw from the field straight natural gas for Grand Rapids' requirements brought a storm of protest both from the city of Grand Rapids which will not benefit materially in a rate schedule on a mixed basis and by producers who have committed their supplies to the Grand Rapids markets.

Chairman William Smith of the commission said that on the basis of the recent U. S. Bureau of Mines reports and private engineer's estimates, the Tri-township gas field reserves do not warrant more than a 50-50 withdrawal for Grand Rapids. The commission previously had granted Consumers Power Company the right to extend its Saginaw Valley to Broomfield pool line into the Tri-township field and later gave Consumers Power Company a permit to construct a line from the Tri-township field to Lansing, servicing about 25 smaller cities along the route.

The Bureau of Mines survey estimated that the Tri-township field has proven reserves of about 32 billion cubic feet. Chairman Smith said to supply the Saginaw Valley, Lansing and Grand Rapids reserves of at least 50 billion would have to be shown.

Independent operators, who committed their gas supply to the Grand Rapids market contend that by limiting withdrawal for Grand Rapids to 50 percent of its requirements that the utilities commission is attempting to dictate sale in the field. Independents control about 50 percent of the proven reserves but under the present set-up will be permitted to sell only half as much as producers who have contracted with Consumers Power Company.

The Saginaw Valley market is drawing about four million feet daily from the Tri-township field. Consumers Power Company, however, will need about three to four million feet more daily when it opens its new line to service Lansing, now completed and scheduled to be put in service on May 15.

Grand Rapids on a straight natural gas basis would require about two to four million feet for domestic use only.

Operators claim that at present they have a visible market of only about one percent of the open flow.

On the basis of 32 billion feet reserves, however, the field could supply the three markets for only about 10 years.

Officials of Grand Rapids Gas & Light Company announced that they would start construction of a 10¾-inch line, about 44 miles from the field to Lansing, at once. Right of way already has been purchased. Construction will be handled by the company, although welding and ditching contracts probably will be let.

The utilities commission also ruled that only one gathering system will be permitted to operate in the Tri-township gas field, which in effect means that Consumers Power Company will gather all the gas for its Saginaw and Lansing lines and for the Grand Rapids Gas & Light Company line. Consumers Power Company recently purchased Petroleum Transportation Company's gathering system in the field. Proration to assure equitable withdrawal in the field has yet to be worked out.

---

**Mt. Pleasant, Mich.**—A survey of reserves and markets for natural gas in Michigan was authorized at the monthly meeting of the directors of the Oil and Gas Association of Michigan with a committee authorized to study if "conditions warrant legislation to correct certain conditions said to exist."

Henry G. Hunt, executive secretary, said the investigation was to determine whether it would be for the best interests of the state and the industry to sponsor legislation that would give the conservation commission much of the control now in the hands of the utilities commission relative to gas industry regulation.

The utilities commission, which now exercises virtually full control over the gas industry, both in the matter of development, construction of pipe lines and marketing, has been under fire for months.

## MICHIGAN
### Completions

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| GRATIOT COUNTY— | | |
| New Haven Oil Co., Shaver 1, 10n-4w, c ne nw-4 | ¶6½ | 960 |
| MONROE COUNTY— | | |
| A. V. Oil Co., Roe 1, 6s-6e, se se sw-19 | 70 | 2161 |
| MECOSTA COUNTY— | | |
| L. T. Barber, Stephens 1, 13n-7w, c ne sw-29 | ¶1½ | 1370 |
| MIDLAND COUNTY— | | |
| Pure Oil Co., Cassell 1, 13n-2w, ne nw-11 | 160 | 3443 |
| MONTCALM COUNTY— | | |
| W. J. Bernier, Dawes 1, 12n-7w, c sw ne-4 | ¶30 | 1289 |
| Gordon Oil Co., DeSpelder 1, 12n-7w, c se sw-4 | ¶24 | 1299 |
| Hy-Nor Gas Co., Eckert 1, 12n-7w, c nw se-10 | ¶12 | 1280 |
| D. F. Jones, Sherman 1, 12n-7w, c se se-10 | ¶22 | 1287 |
| J. W. Leonard, Jr., Brown 1, 10n-5w, ne se sw-11 | 100 | 3193 |
| Tow 4, 10n-5w, sw ne se-3 | 700 | 3196 |
| Gulf Refining Co., Fisher 2, 10n-5w, sw ne ne-2 | 30 | 3194 |
| Daily Crude Oil Co., Hansen 2, 12n-6w, sw ne ne-10 | 140 | 3117 |
| SAGINAW COUNTY— | | |
| Smith Petroleum Co., Morse-Getty 4, 10n-6e, ne se nw-20 | 20 | 1547 |

*Failures; †Junked; ¶Million cu. ft. gas.

## ACIDIZE AND SHOOT

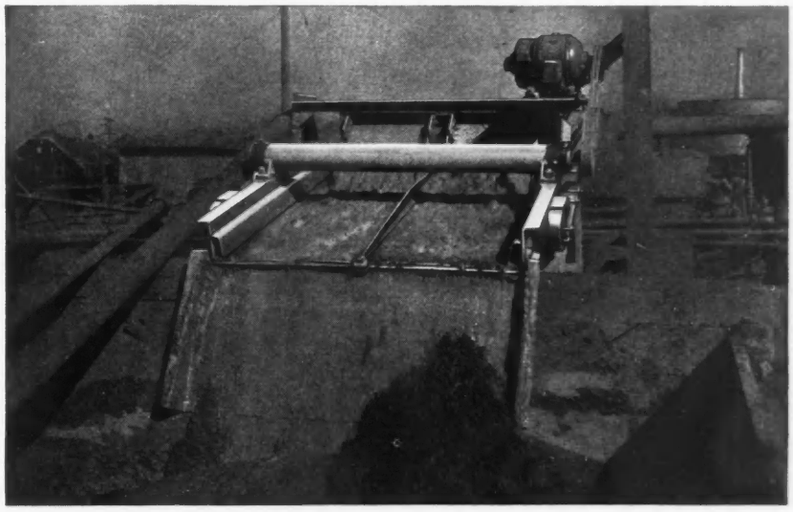
**Mt. Pleasant, Mich.**—Sun Oil Company's Reed 1, 17n-2w-12, Gladwin County, ¾-mile southeast extension test of the Beaverton pool will be plugged back to 3914 feet, acidized and shot to a Dundee oil show.

The test topped Dundee at 3840 feet with a show of oil reported between 3904-18 feet with water at 3918 to 3972 feet.

Great Lakes Oil Company's Campbell 1, 17n-2w-3, a half-mile northwest extension of the Beaverton pool, which initialed 65 barrels natural, produced 148 barrels after acid from Dundee lime and settled to about 110 barrels the third day on the pump.

Chas. Bell's Wegner 1, 11n-2e-10, Saginaw County, probably will be abandoned after drilling into black water at 3210 feet. Dundee was topped at 3116 feet without commercial Dundee oil or gas showings.

The 3223 feet of 6-inch casing on Jetter Oil Company's Pitcher 1, 10n-5w-5, Crystal pool extension, Montcalm County, collapsed next to the bottom joint, delaying Dundee testing probably for a week. It is a two-mile west extension test.

# LONG LIFE

***Fine Separation***
***Large Capacity***

● The screen cloth of the Link-Belt rotary mud screen is of fine mesh, enabling it not only to reject large, heavy cuttings but also sand and shale—thoroughly cleaning the mud. The long life obtained from the screen cloth and its exceptionally large area give the added advantages of low operating cost, high efficiency, and large capacity.

The Link-Belt screen will handle more mud for a given size screen cloth opening. Send for Folder No. 1472.

**LINK-BELT COMPANY**

PHILADELPHIA LOS ANGELES DALLAS INDIANAPOLIS
Houston, Fred Wallace, 4317 Montrose Blvd., P.O. Box 1082 Oklahoma City, W. H. Abele, Box 305, Route 4
Export Sales Office: 2680 Woolworth Bldg., New York, U.S.A. Cable Address "LINKBELT"
Sold By Most Supply Houses 5642

# LINK-BELT
# VIBRATING SCREEN
***for Reconditioning Rotary Mud***

# SPEED with SAFETY

# O'BANNON

## Safety Sucker Rod Elevators

Recently Jess Moss, production foreman for the Sun Company at Spindletop, learned at first hand just how strong and safe O'Bannon Elevators are. A pump was sanded up, and quoting Mr. Moss:

***"I lifted 3,000 feet of 2½-inch tubing, full of rods and fluid, with a set of your elevators. After this proof of strength I have a lot of confidence in them."***

**O'Bannon Elevators are not only safe and strong—they are fast. They snap onto rod—and stay there until purposely released by the operator. Two separate, independent latches, either sufficient to prevent dislodgment of rod, are safely and easily released from the rear.**

Sold by SUPPLY STORES

MANUFACTURED BY
WALTER OBANNON CO.
TULSA, OKLA.


# EASTERN FIELDS

## Completions

WEEKLY STAFF REPORT

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| **OHIO** | | |
| ATHENS COUNTY— | | |
| Bowman Bros., J. & M. Layde 5... | * | 1185 |
| Ohio Fuel Gas Co., Sunday Creek Coal Co. 6061 | ¶ | 1185 |
| BELMONT COUNTY— | | |
| A. J. West & Co., E. O. Perkins 1.. | * | 1522 |
| Mike Hardwick & Co., C. Taggart 2 | ¶ | 725 |
| COSHOCTON COUNTY— | | |
| Moore & Co., W. Mossholder 1..... | ¶ | 3080 |
| Preston Oil Co., Wm. Frazee 2..... | 120 | 3195 |
| FAIRFIELD COUNTY— | | |
| City Natural Gas Works, Mondhank & Bougher 2 | ¶ | 2029 |
| GUERNSEY COUNTY— | | |
| George Jewell & Co., C. W. Carlisle 1 | ¶ | 1601 |
| JEFFERSON COUNTY— | | |
| Featner & Co., Crabbit 1..... | * | .... |
| Featner & Co., Crabbit 1..... | * | .... |
| KNOX COUNTY— | | |
| J. B. Reed & Co., Lewis Dial 1..... | * | 2634 |
| D. C. Highman & Co., H. V. Ulrey 1 | 3 | 735 |
| Sterling C. Brown & Co., W. O. Ross 1 | 5 | 684 |
| City Nat. Gas Works, Mondhank 2.. | ¶ | 2029 |
| LICKING COUNTY— | | |
| Pure Oil Co., Paul J. Primrose 2... | 90 | 3175 |
| E. H. Everrett, Neeithers Hrs. 3.... | 130 | 3088 |
| LORAIN COUNTY— | | |
| Walter Kline, J. C. Barge 1..... | ¶ | 962 |
| Schneider & Wyles, E. P. Featherstone 1 | ¶ | 2508 |
| Dempsey & Cushing, Cleveland Stone Co. 1 | ¶ | 2525 |
| William Dempsey, J. & A. Palmer 1. | ¶ | 2634 |
| MEDINA COUNTY— | | |
| Oko Oil & Gas Co., Essig 70..... | * | .... |
| E. R. Edson Son Co., Wideman 28.. | * | 517 |
| O.K.O. O&G, Essig 70..... | 2 | .... |
| MEIGS COUNTY— | | |
| Ohio Fuel Gas Co., Emerson Hysell 1 | ¶ | 692 |
| Leroy Holmes & Co., Wilber Bradford 2 | ¶ | 2037 |
| MONROE COUNTY— | | |
| John Lumbatis, Clyde Robisson 1.... | ¶ | .... |
| Roy E. Decker, Elias F. Jeffers 2... | * | 1580 |
| Robinson & Greene, Katherine Baker 2 | 4 | 1240 |
| MORGAN COUNTY— | | |
| Leland & Co., H. F. Tuttle 1..... | 2 | 1097 |
| MUSKINGUM COUNTY— | | |
| Hopewell F.&G. Co., Anna Carroll 1 | * | 4250 |
| Mid East Gas Co., J. W. Elson 1... | ¶ | 4136 |
| NOBLE COUNTY— | | |
| Local Co., H. D. Miller 2..... | * | 1101 |
| PERRY COUNTY— | | |
| Ohio Fuel Gas Co., H. A. Gilmore 1. | ¶ | 2845 |
| STARK COUNTY— | | |
| East Ohio Gas Co., Katherine Melden 2 | * | .... |
| Ohio Fuel Gas Co., B. F. Walter 1. | * | 4140 |
| Brendel Prod. Co., Magdaline Jones 1 | * | 4597 |
| East Ohio Gas Co., R. V. Mitchell 1. | ¶ | 4280 |
| Wittmer Co., C. F. Rohr 1..... | * | .... |
| Ohio Fuel Gas Co., B. F. Walter 1.. | * | 4140 |
| East Ohio Gas, Katherine Belden 2. | * | .... |
| Brendel Prod. Co., Magdaline Jones 1 | * | 4597 |
| White & Lyons, Chas. Daugherty 1. | ¶ | 4502 |
| East Ohio Gas Co., R. V. Mitchell 1. | ¶ | 4280 |
| Wittmer Co., C. T. Rohr 1..... | * | .... |
| WASHINGTON COUNTY— | | |
| T. J. Hamilton, J. W. Payton 2..... | ¶ | 1766 |
| Twin Oaks Oil Co., Christian Lauer 16 | 1 | 376 |
| J. C. Merlan, Elmer S. Decker 3.... | ¶ | .... |
| Union Gasoline Oil Corp., McClanahan 1 | ¶ | 2667 |
| WAYNE COUNTY— | | |
| Ohio Fuel Gas Co., Eli S. Finley 1.. | ¶ | .... |
| John Harpster, E. & T. Beichler 1.. | ¶ | 492 |
| L. Cronen, Marcus Highman 3..... | * | 1346 |
| Ohio Fuel Gas Co., E. S. Finley 1.. | ¶ | .... |
| **INDIANA** | | |
| GIBSON COUNTY— | | |
| Gib Van Oil Co., Agnes Haskins 5.. | * | .... |
| Mid-West Dev. Corp., Maud Dennis Harper 1 | 100 | .... |

*Failures; †Junked; ¶Million cu. ft. gas.

| Company, Well and Location | Init. Prod. Bbls. | Depth |
|---|---|---|
| DECATUR COUNTY— | | |
| Hoosier Public Utilities Co., N. R. Landham & Co. 1..... | 5 | .... |
| DUBOIS COUNTY— | | |
| Claud Noble, J. D. Neukan 1..... | * | .... |
| HANCOCK COUNTY— | | |
| J. Harve Snider, Wilber Messena 1. | ¶ | .... |
| KNOX COUNTY— | | |
| Olophant & Sage, Ewing Emison 1.. | * | .... |
| Becca Oil Trust, J. M. Latshaw 1... | * | .... |
| O. A. Thayer, Burton Yates 3..... | 15 | .... |
| Loyd Parker, Claude Decker 1..... | * | .... |
| **KENTUCKY** | | |
| OHIO COUNTY— | | |
| Ellis & Co., J. H. Evans, 74 acres, 3. | * | .... |
| Osborne & Co., E. Sexton 1..... | * | .... |
| Stewart & Gealey, J. H. Roberts 27.. | 8 | .... |
| B. E. Calvert & Co., N. T. Baisie 3. | ¶ | .... |
| Farrelson & Co., Walter Stiles 1.... | 40 | .... |
| Kentucky Nat. Gas, N. Rodgers 12.. | 50 | .... |
| McLEAN COUNTY— | | |
| Humes, Steel & Co., J. Conrad 2... | * | .... |
| J. C. Miller, Swanson Tract 2..... | 80 | .... |
| Hupp & Duff, C. C. Crow 10-A 2... | * | .... |
| Walter Sargent, Hudson 1..... | * | .... |
| J. B. Mayer, P. H. Morton 6..... | * | .... |
| Bailey & Co., Martin Tract 1..... | * | .... |
| Sunflower O&G, Shockley Bros. 4.. | * | .... |
| Kentucky Prod. Co., Colard Grave Yard 1 | * | .... |
| Major Washburn, Shockley Bros. 3.. | 50 | .... |
| MUHLENBERG COUNTY— | | |
| May Oil Co., R. O. Kennedy 3..... | 100 | .... |
| WARREN COUNTY— | | |
| Onsel Bros. & Co., E. G. Savage 1.. | 30 | .... |
| **WEST VIRGINIA** | | |
| BOONE COUNTY— | | |
| United Fuel Gas Co., Horse Creek Land 4582 | ¶ | .... |
| BROOM COUNTY— | | |
| Owens Illinois Gas Co., Little Coal Land Co. 14 | ¶ | .... |
| Roberts 3 | ¶ | .... |
| Ballard 3 | ¶ | .... |
| Federal Coal Co., Federal Coal Co. 80 | ¶ | .... |
| Pure Oil Co., L.R.&P. Tract B&C 41 | ¶ | .... |
| CABELL COUNTY— | | |
| Shale Gas Co., Johnson 1..... | ¶ | .... |
| W. C. Kingery & Co., Pratt Hrs. 3. | ¶ | .... |
| Pridmore & Adkins, Lucas Hrs. 2... | ¶ | 983 |
| Ky.-W. Va. Gas Co., R. N. Heath 1 | ¶ | 1473 |
| W. E. Farley 1..... | ¶ | 1493 |
| H. H. Adkins & Co., R. L. Johnson 1 | ¶ | 3200 |
| W. C. Carter & Co. 1..... | ¶ | 1283 |
| West Virginia Gas Co., Savage 1.... | ¶ | .... |
| CALHOUN COUNTY— | | |
| Kingsburg & Dallman, H. Lynch 2 | 8 | .... |
| W. C. Kingery & Co., L. S. Ayres & Co. 1 | ¶ | .... |
| F. F. McIntosh, C. L. & G. W. Jarvis 3 | 10 | .... |
| CLAY COUNTY— | | |
| Elk River Gas Co., Keith 1..... | ¶ | .... |
| Virginia Gas & Oil Co., Brown Swan & Co. 32 | 2 | .... |
| Brown Swan & Co. 33..... | 4 | .... |
| GILMER COUNTY— | | |
| Cain & Co., Moore & Stewart 1..... | * | .... |
| Hope C.&R. Co., Boggs 1..... | ¶ | .... |
| HANCOCK COUNTY— | | |
| R. J. Braden & Co., Hewitt Hrs. 22. | 10 | .... |
| KANAWHA COUNTY— | | |
| G. L. Cabot, Inc., Wm. Tomkins 7.. | ¶ | .... |
| Columbia Carbon Co., Copenhaver 4. | ¶ | .... |
| H. C. Zogg & Co., Dunn 1..... | ¶ | .... |
| LEWIS COUNTY— | | |
| Hope Construction & Refg., G. W. Rohrbough 1648 | * | .... |
| LOGAN COUNTY— | | |
| Boone County Coal Co., Boone County Coal F-6..... | ¶ | .... |
| RALEIGH COUNTY— | | |
| G. L. Cabot, Inc., Beaver Coal Co. 10 | ¶ | .... |
| RITCHIE COUNTY— | | |
| W. H. Bickel, Gibson 1..... | * | .... |
| C. S. Morris, Ayers 2..... | * | .... |
| H. N. Reinhardt, Reinhardt 8..... | 1 | .... |
| R. C. Jackson & Co., Lanhan 2..... | 2 | .... |
| F. E. Pritchard, Bradford 1..... | 1 | .... |
| Smith & Hendershot, Bonnett 1..... | ¶ | .... |
| ROANE COUNTY— | | |
| Henderson Oil Co., C. J. Burdette 2. | 5 | .... |
| WAYNE COUNTY— | | |
| V. L. Lusher, Lusher 1 ..... | ¶ | .... |
| PLEASANTS COUNTY— | | |
| Dunn Oil Co., Kelley 1..... | * | .... |
| WIRT COUNTY— | | |
| W. C. Patterson, Hale 26..... | 1 | .... |
| W. Virginia Gas Co., J. J. Porter 1. | ¶ | .... |
| J. J. Shore, Riley Mayle 1..... | 10 | .... |
| Glen W. Roberts, F. J. Mills 1..... | 10 | .... |
| WETZEL COUNTY— | | |
| Null & Moorehead, A. Church 1.... | ¶ | .... |

*Failures; †Junked; ¶Million cu. ft. gas.

# THE OIL WEEKLY REPORT ON IMPORTANT

# *Wildcat Tests*

## ALABAMA

HOUSTON COUNTY—Rice O&G Co.'s Oakley Est 2, nw sw 9-3n-29e, dr 2630 ft chalk.

## ARKANSAS

CALHOUN COUNTY—Ben Barnett's Freeman Smith 1, se nw sw 36-15-14, woc 16-in csg 60 ft.

COLUMBIA COUNTY—J. C. Buckbee, tr's J. B. Wilson 1, sw ne 17-17-18, dk and mir.

CRAWFORD COUNTY—Trumbo et al's Craddock 1, c nw ne 3-11-30, dr 485 ft.

DALLAS COUNTY—Kel-Mac Land & Roy. Co.'s Owen 2, nw sw 28-10-16, dr 1285 ft.

HEMPSTEAD COUNTY — Easton & May's Conway 1, ne sw 20-12s-27w, 12½-in csg 80 ft. F. W. Martin's & M.K.D. Fitzwater's Lafferty 2, se nw 17-14-24, 7-in csg 1980 ft coring 2148 ft.

LA FAYETTE COUNTY—Erwin & Leach's Bodcaw 3, nw nw 20-16-23, elev 250 ft dr 5823 ft. Joe Modisett et al's Frost Lbr. Co. i, 29-19-24, elev 261 ft massive anhydrite 5096-5135 ft cemtd 7-in csg 5310 ft, td 5315 ft.

OUACHITA COUNTY—Phillips Pet. Co.'s J. D. Reynolds 1, se nw 27-15-15, elev 155 ft 9⅝-in csg 4891 ft, sd cur titles td 4908 ft. O. F. Whittaker's Howard 1, nw ne 20-12-16, mim.

UNION COUNTY—Mrs. Mamie McCurry et al's Slaughter 1, se se 9-17-16, dr 2095 ft (4500 ft test). Root Pet. Co.'s White 1, se sw 36-17-15, sr 2705 ft.

## COLORADO

ADAMS COUNTY—Hills Dome Oil Lease Hills 1, csl se se 27-3s-64w, recemented at 4100 ft. td 4145 ft.

ARCHULETA COUNTY—Oil City Petroleum Co. & Archuleta Oil & Gas Co., Reeder 1, swc lot 5, sec 24-33n-2e, lowered 10 in csg to 205 ft.

BACA COUNTY—Robb, Morgan & Gross 1, nw nw nw 24-32s-48w, spd and sd.

CHEYENNE COUNTY — Stanley Britall, Inc., Sipe 1, cne sw 26-12s-47w, ru.

MORGAN COUNTY—Swisher et al Lunt 1, sw sw sw 3-5n-60w, td 1449 ft, ur 4¾ in csg at 1420 ft.

PARK COUNTY—South Park Oil Co., State 1, se se sw 16-11s-17w, near completion at 4157-4159 ft. Hole full oil. Si for tankage.

## CALIFORNIA

### FRESNO COUNTY

COALINGA—Jas. M. Conlon Co.'s No. 1, 30-19-15, td 889 ft, co.

MONOCLINE RIDGE—Seaboard's Welsh 1, 10-16-13, dr sand and shale 3020 ft.

CANTUA CREEK—Gulf's S. P. Land 1, 3-17-15, bldg rig.

### KERN COUNTY

DELANO—John W. Alford's Quinn 1, 14-25-27, td 2399 ft, co.

SOUTH MARICOPA—American Pacific Oil Co.'s No. 1, 18-10-23, rig.

McKITTRICK—Belmac Dr. Co.'s Douglas 1, 22-29-21, td 4800 ft, fsh.

DEVIL'S DEN—Cumberland Oil Co.'s Mabry 2, 17-26-18, dr hard shale 4708 ft.

McVAN—Framac Oil Co.'s Brown 2, 22-27-27, td 1413 ft, run 47 it 6⅝-in liner, 27 ft perforated, 8⅝-in cemented at 1375 ft.

SOUTH BUTTONWILLOW—General Pet.'s Doyle-McKeon 1, 5-30-24, td 6149 ft, co to 6055 ft, formation tester showed 2000 ft salt water, to recement 7-in at 6050 ft.

NORTH MOUNT POSO—H. Mann's No. 2, 27-26-28, td 1537 ft, fsh.

MOUNTAIN VIEW—Mohawk Oil Co.'s Earl Fruit 1, foundation.

BUENA VISTA LAKE—Ohio's No. A-6, 32-31-26, dr shale 4298 ft.

STRAND—Ohio's D-1, 1-30-25, dr sand and shale 4982 ft.

GRAPEVINE—Ohio's Title Ins. 1, 36-11-19, lcn.

**ABBREVIATIONS**

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

| | |
|---|---|
| *—*dry hole abandoned well.* | owdd—*old well drilling deeper.* |
| ‡—*salt water (completions.)* | owpb—*old well plugging back.* |
| †—*junked and abandoned.* | pb—*plugged back or plugging back.* |
| ¶—*million feet of gas.* | r—*reaming.* |
| abd—*abandoned.* | rog—*rig on the ground.* |
| bbls—*barrels.* | rur—*rigging up rotary tools.* |
| br—*building rig.* | rust—*rigging up standard tools.* |
| b.s.—*basic sediment.* | sd—*shut down.* |
| csg—*casing.* | sdtr—*sidetracking.* |
| co—*cleaning out.* | sg—*show gas.* |
| dd—*drilling deeper.* | si—*shut in.* |
| dk—*derrick.* | so—*show oil.* |
| dr—*drilling.* | so & g—*show oil and gas.* |
| fsg.—*fishing.* | spd—*spudding.* |
| ft—*feet.* | sr—*straight reaming.* |
| hfw—*hole full of water.* | sw—*salt water.* |
| in—*inches.* | td—*total depth.* |
| lcn—*location.* | ur—*underreaming.* |
| m—*milling.* | wih—*water in the hole.* |
| mim—*moving in materials.* | wo—*workover.* |
| mit—*moving in tools.* | wocs—*waiting on cement to set.* |
| mot—*moving out tools.* | wosr—*waiting on standard rig.* |
| n, s, e, w—*north, south, east, west.* | |
| oih—*oil in hole.* | |

MOUNT POSO—Poso Pet. Co.'s No. 1, 2-27-27, dr 1408 ft, top chanac 1270 ft.

ROUND MOUNTAIN—Piute Holding Co.'s Piute 1, 17-28-29, lcn.

GRAPEVINE—Reserve O. & G. Co.'s No. 1, 33-11-19, td 6030 ft, flowed mud 5 hrs, 1200 lbs casing pressure, 1,000,000 ft gas rate, swabbing and flowing mud and gas by heads.

McVAN—Santa Anita Oil Co.'s Good Hope 1, 11-27-27, sd 416 ft.

NORTH MOUNT POSO—Santa Carla Oil Co.'s Glide 1, 7-26-28, dr sand 1800 ft.

STEVENS AREA—Shell's K. C. L. 1, 29-30-26, dr hard brown shale 7751 ft.

WHEELER RIDGE—Silver Gate Co.'s Tejon 1, 7-10-19, td 2985 ft, redr at 2910 ft.

LOST HILLS—Standard's United 1, 2-26-20, td 6314 ft, redr at 5990 ft.

COMANCHE POINT—Tejon Ridge Oil Co.'s No. 1, 23-32-29, dr shale 2335 ft.

McFARLAND—Woods & Bailey's No. 1, 16-26-26, dr sand (etchegoin) 3374 ft.

### HUMBOLDT COUNTY

EUREKA—Texas Co.'s Eureka 2, 22-3-1, td 4357 ft, trying to loosen drill pipe and blew some gas.

### KINGS COUNTY

PYRAMID HILLS—Associated's Avenal 1, 35-23-17, foundation.

TULARE LAKE—Hancock-Union's Giannini 1, 28-22-20, dr sand and shale 4820 ft. Kettleman View O. & G. Corp.'s No. 1, 29-22-19, sd 1620 ft.

PYRAMID HILLS—Royalty Service Corp.'s No. 1, 16-24-18, sd 4201 ft.

### SAN JOAQUIN COUNTY

TRACY—Amerada's F. D. L. 5, 15-2-5, td 6160 ft, plug 4100 ft.

STOCKTON—Holly Dev. Co.'s No. 1, 16-2-5, lcn. Standard Oil Co.'s McDonald 1, 25-2-4, dr sand and shale 3650 ft.

### SAN LUIS OBISPO COUNTY

CARRIZO PLAINS—Barnsdall's Wreden 1, 24-28-17, spud April 6, dr.

ARROYO GRANDE—Pismo Pet. Co.'s Scott 1, 5-32-13, dr sand 2544 ft.

PASO ROBLES—Geo. Moss' Paso Robles 1, 27-26-13, rig.

CARRIZO PLAINS—J. C. Theriot's Holland 1, 22-32-22, td 1906 ft, swab twice a week, 120 ft rise, 1/3 oil.

ELKHORN—United Oil Co.'s No. 1, 2-32-21, wocs 16-in at 135 ft, td 150 ft.

CHOLAME—Willett Oil Assn.'s Jack 2, 10-25-15, td 3647 ft, co.

### SOLANDA COUNTY

RIO VISTA—Amerada's Emigh 1, 26-4-2, foundation.

### TEHAMA COUNTY

CORNING—Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, td 7010 ft, rep equip.

### MONTEREY COUNTY

WEST PLEYTO—Shell's Branch 1, 34-24-10, dr sand and shale 7878 ft.

### SANTA BARBARA COUNTY

SUMMERLAND—Tony Carnero's Fithian 1, 8-4-24 (was Carnero & Dietzman), dr hard sand 470 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbough 2, 18-7-34, sd 3940 ft.

CARPENTERIA—Santa Barbara O. & G. Co.'s Bryce 1, 29-4-25, sd 3000 ft, wet.

SANTA MARIA—Union's Adam 1, 24-10-34, td 2576 ft, 8⅝-in at 2026 ft, potential test 2376 bbls of 16.4 gravity oil and 400,000 ft gas. Union Oil Co.'s Enos 1, 19-10-33, lcn.

POINT CONCEPCION—Union's Sudden 1, 10-5-25, dr sand and shale 1950 ft.

LOMPOC—York Oil Co.'s No. 3, 33-8-34, foundation.

### VENTURA COUNTY

SHIELL'S CANYON—Bankline Oil Co.'s Calumet B-1, 3-3-19, td 4074 ft, redr 3864 ft. Pet. Securities Co.'s Home Ro. 3, 3-3-19, dr hard sand 453 ft. Texas Co.'s Shiells 129, 4-3-19, dr red shale and sand 4680 ft.

SESPE—Bankline Oil Co.'s Wakefield 1, 36-5-20, dr gray sand and shale (top Eocene 2447) 2540 ft. Condor Oil Co.'s Condor 1, 6-4-19, dr shale 1150 ft. Tapo Tapo Oil Co.'s No. 3, 33-5-19, dr shale 1250 ft.

BARDSDALE—Bestco Pet. Co.'s Frey 1, 2-3-19, dr red shale 600 ft. Duke Oil Corp.'s No. 1, 7-3-19, sd 3462 ft. El Rancho Oil Co.'s Elkins 1, 9-3-19, td 4041 ft, run 2½-in tubing to 4000 ft, tested salt water, perforating gun. Laing & Jacobs 1, td 1225 ft, lost bailer. Union's Dryden 10, 12-3-20, td 6055 ft, landed 836 ft of 5¾-in liner including 803 ft of perforated at 6048 ft, swabbing.

PIRU—Belsa Chica Oil Corp.'s Snow 3, 4-4-18, dr shale 1154 ft. R. P. Johnson's Rubel 1, 21-4-18, dr sticky shale 1407 ft.

SOUTH MOUNTAIN—Calco Pet. Corp.'s Calco 3, 17-3-20, dr shale and oil sand 3030 ft.

OXNARD—General's McGrath 2, 26-2-23, dr sand and shale 5302 ft.

SANTA PAULA — High Mesa Oil Co.'s Butcher 1, 16-4-22, td 650 ft, co. Rennie Bros.' No. 1, 21-4-21, sd 450 ft.

SIMI—Jas. S. Hull's No. 1, 2-2-18, dr hard sand 1700 ft.

SESPE CANYON—Merchant Pet. Co.'s No. 1, 1-4-20, grade.

### SOUTHERN CALIFORNIA

PUENTE—Chas. R. Butler's Butler 1, 14-2-10, dr hard sandstone 4120 ft.

NORTH LONG BEACH—Geo. L. Clayton's No. 1, 31-3-12, sd 6765 ft.

TORRANCE—Cedri Oil Co.'s No. 1, 28-4-13, dr shale 2510 ft. Eyer Pet. Corp.'s No. 1, 26-4-13, td 3794 ft, tested wet, recemented.

WILMINGTON—General's Terminal 1, foundation. Harbor Dr. Co.'s No. 1, material. Sovereign Oil Corp.'s Banning 1, 28-4-13, td 3663 ft, plug 3535 ft, sd.

TOPANGA CANYON—Monarch Pet. Co.'s Sylvia Park 1, 5-1-16, td 650 ft, co.

WEST LONG BEACH—Shell's Amebco 1, 13-4-13, dr shale 6097 ft.

EL NIDO—Shell's McKenna 1, 33-3-14, dr hard oil sand 7190 ft.

ARTESIA—Vanco Dev. Co.'s Millard 1, 25-3-12, td 5888 ft, may dr deeper.

DOMINGUEZ—West American Oil Co.'s Del Amo 1, 3-4-13, dr shale streaks sand 7918 ft.

NEWHALL—Yant Pet. Corp.'s No. 5, 1-3-16, dr oil sand 1936 ft; No. 6, rigged up.

### ORANGE COUNTY

NEWPORT—Commander Oil Co.'s Mesa 1, 29-6-10, dr brown shale 1124 ft.

YORBA LINDA—Continental's Carlton Com. 1, 21-3-9, td 4796 ft, plug 2492 ft, testing casing.

WESTMINISTER—Hillman & Long's No. 1, 14-5-11, dr shale and shell 6531 ft.

SAN BERNARDINO COUNTY — Ducerne Valley-Albert Pet. Co.'s Chute 1, 14-4-1, rur.

BARSTOW—Equitable Pet. Explor. Co.'s No. 1, 11-10-5, td 2252 ft, setting whipstock to redr.

## FLORIDA

HILLSBOROUGH COUNTY—Southern Pet. Co.'s Mizell & Williams 1, se ne 4-32s-21e, junked abnd td 2625 ft. Mizell & Williams 2, se ne 4-32s-21e, spd dr 961 ft.

JACKSON COUNTY — Mrs. Mamie Hammonds et al's Grandberry 1, sw ne 15-5n-9w, 12-in csg 200 ft woc 240 ft.

LAKE COUNTY—Oil Dev. Co. of Fla's Gulf Expl. Co. 1, se se 17-24s-25e, coring 3312 ft oolitic limestone; Union Oil & Ref. Co.'s Gulf Expl. Co. 1, se sw 17-24s-25e, fsg 800 ft.

NASSAU COUNTY—J. Eugene Brown et al's Bank of Hilliard 1, 8-3n-24e, dk.

## KANSAS

BARTON COUNTY—Morgan & Flynn et al's Zimmer 1, se se sw 30-19s-14w, ur 8-in csg 3050 ft. Hilligoss et al's Schmidt 1, ne ne ne 27-19s-11w, dr 3476 ft. Simpson, Noble & Atlantic's Niss 1, cnw ne 31-20s-13w, dr 3000 ft. Murphy & Morgan's Robinson 1, ne ne sw 21-16s-14w, ur 8-in csg 2750 ft. Hinkle's Smith 1, sw nw nw 1-17s-11w, running 8-in csg 2980 ft. Merriam's Soaken 1, sw s se 21-17s-11w, dr 1924 ft. Davison et al's Birzer 1, sw se sw 22-17s-12w, spd. Ramsey et al's Hunt 1, nw nw nw 10-18s-11w, dr 3233 ft. Schermerhorn Oil Co.'s Hunter 1, ne ne ne 29-18s-15w, dr 785 ft. Buchanan & Alexander's Langford 1, ne ne sw 14-20s-11w, dr 2395 ft. Wakefield & Johnson's Bumm 1, sw ne ne 22-19s-12w, to skid rig.

BUTLER COUNTY—Ellis et al's Pettit 1-A, se se nw 21-28s-6e, rig. Sanford et al's Weaver 1, se se ne 11-28s-5e, mim.

COWLEY COUNTY—Penwest's Clover 1, ne se se 8-31s-7e, pb 1490 to cement 5-in csg at 1410. Roth & Faurot's Guthrie 1, se ne nw 30-33s-8e, dr 3135 ft. Mead Bros et al's Orr 1, se se sw 23-31s-4e, dr 2485 ft. Mickleson et al's Wallace 1, sw se se 10-33s-4e, sd 35 ft. Wakefield's Wilson 1, nw nw nw 4-32s-3e, dr 3340 ft. De Genther Oil Co.'s Holt 1, nw nw se 15-30s-5e, mim.

EDWARDS COUNTY — Stanolind-Elwell's Donovan 1, cse se 14-25s-18w, br.

ELLIS COUNTY—Jones Bros. & Carpenter et al's Solomon 1, se se sw 28-11s-19w, ur 15-in csg 861 ft. Twin Drlg. Co.'s Reidel 1, sw sw ne 27-13s-16w, td 3184 ft, rust. Brunson & Ewers-Simpson's Gross 1, ne ne sw 29-14s-17w, wocs 767 ft. Bridgeport Mach & J. J. Hall's Madden Estate 1, ne nw nw 26-15s-18w, sd 350 ft. Lario O. & G. Co.'s Walter 1, se ne sw 2-12s-18w, co 1348 ft. Tom Palmer's Schoenthaler 1, ne ne nw 31-12s-19w, rig. Harris & Haun et al's Schmeidler 1, se se sw 3-13s-17w, ru. Yarnell & Carlson's Phillip 1, nw nw se 2-14s-18w, ru. Muth et al's Penney 1, sw sw se 29-14s-18w, mim. Twin Drlg. et al's Copeland 1, ne ne sw 26-14s-19w, br. Empire's Dreher 1, ne ne ne 27-15s-19w, lcn.

ELLSWORTH COUNTY — Skiles et al's Kafka 1, ne ne sw 15-17s-8w, dr 2840 ft. Empire O. & R. Co. et al's Kroesch 1, nw nw se 33-17s-9w, dr 1870 ft.

FINNEY COUNTY—Lone Star State Drlg. Co.'s Hamlin 1, sw sw ne 31-24s-34w, rur.

GREENWOOD COUNTY—Dunn's Dawson 1, cnw ne 27-26s-13e, dr 1400 ft.

HARPER COUNTY—Marathon Oil Co.'s Zellers 1, csw nw 17-35s-8w, fsg 5410 ft.

HARVEY COUNTY—Empire O. & R. Co.'s Webster 1, se se sw 8-24s-2w, running 7-in csg 3338 ft. Harburney Oil Co.'s Scrag 1, nw nw se 24-22s-3w, dr 2580 ft. Western Kansas Co.'s Warkentin 1, csw sw 1-23s-2w, sd 2986 ft.

MARION COUNTY—Milton et al's Young 1, nw nw se 17-21s-3e, td 3088 ft, D & A.

McPHERSON COUNTY—Empire's Cunningham 1, se se se 26-18s-1w, ru.

NESS COUNTY — Continental Oil Co.'s Thompson 1, ce½ e½ sw 13-18s-26w, running 16-in csg 158 ft.

RENO COUNTY—McPherson Co. et al's Miller 1, se se ne 23-24s-5w, dr 3500 ft. Helmerich & Payne's Schwaiger 1, sw se ne 27-26s-5w, fsh 3800 ft. Dickey Oil Co.'s Shepherd 1-A, ne ne nw 22-26s-9w, rust at 4125 ft. Cheney et al's Moore 1, ne ne ne 14-26s-8w, br.

RICE COUNTY—Gratton et al's Williams 1, sw sw nw 17-18s-7w, dr 2830 ft. Continental & Empire's Nikkel 1, ne sw sw 13-18s-8w, td 3214 ft, 2000 gals, acid, pumped 883 bbls oil. Aylward et al's Oberle 1, se se sw 19-18s-10w, sd 3402 ft. Gilmac Oil Co.'s Sargent 1, se se se 31-18s-6w, spd & sd. Dickey Oil & Continental Oil Co.'s Newkirk 1, ne ne sw 11-18s-7w, ru. Witt's Hall 1, se se nw 3-20s-9w, dr 1940 ft. Duwe & Schneider's Wright 1, ne ne ne 36-21s-7w, dr 2530 ft. Simpson & Noble et al's Pulliam 1, cs¼ n¼ ne 35-19s-8w, mim. Skiles et al's Stout 1, se se se 6-21s-9w, br. Beardmore et al's Fuller 1, sw sw se 23-18s-7w, br. Sage et al's Patton 1, sw sw sw 5-21s-7w, cellar.

ROOKS COUNTY—Murfin et al's Washusin 1, ne ne se 12-6s-18w, dr 10-in csg 2250 ft. Pryor & Lockhart's Bradley 1, sw sw ne 31-10s-16w, sd 3650 ft. Skaer Oil Corp. & Reese's Dryden 1, ne ne ne 28-10s-17w, ru. Lester & Dean's Burtt 1, se se ne 29-10s-20w, dr 155 ft. Hartman & Blair et al's Hall 1, nw nw nw 25-10s-17w, br.

RUSH COUNTY—Pryor & Lockhart's Stegman 1, sw nw ne 11-16s-17w, rig. Keith et al's Dartmouth Savings Bank 1, sw sw ne 3-17s-18w, td 3346 ft, rust. Rose Spring et al's Jacobs 1, sw se nw 8-16s-17w, dr 1305 ft. Boyle & Grossman's Wilson 1, ne ne ne 33-17s-19w, report last week in error, sd 415 ft. National Ref. Co.'s Werth 1, nw ne ne 7-16s-18w, dr 1165 ft.

RUSSELL COUNTY—Empire et al's Major 1, se se se 11-14s-12w, td 3261 ft, D & A. Bridgeport Mach. & Lauck's Wycoff 1, se nw ne 27-11s-13w, dr 3325 ft. Berry et al's Cook 1, ne ne se 19-11s-13w, dr 2425 ft. Eisenhour & Shaffer's Humes 1, sw sw sw 6-14s-12w, dr 2310 ft. Reynolds' Fredrickson 1, se sw se 6-13s-12w, sd 2620 ft. Darby Pet. & Continental Oil Co.'s Letsch 1, se ne nw 34-14s-13w, dr 2175 ft. Central Pet. Co.'s Furthmeyer 1, ne ne ne 28-14s-15w, running 15-in csg 340 ft. Stearns & Streeter et al's John Hancock Insurance 1, se sw sw 31-12s-14w, ru. Wakefield et al's Krug 1, ne nw sw 7-15s-14w, mim.

SEDGWICK COUNTY—Dickey Oil Co.'s Ayers 1, sw sw nw 12-27s-2e, fsh 590 ft.

STAFFORD COUNTY—Farris et al's Snyder 1, se se nw 3-21s-11w, td 3111 ft, wocs. Kessler & Their's Evens 1, ne ne ne 30-21s-11w, sd 3550 ft. Lario O. & G. Co. et al's Andress 1, cnw ne 1-21s-13w, dr 3377 ft. Stanolind-Atlantic's Shotten 1, sw sw sw 27-22s-13w, rur.

SUMNER COUNTY—Helmerich & Payne et al's Elwell 1, nw nw ne 18-34s-1e, dr 3703 ft. Wilcox O. & G. et al's Hess 1, se se nw 13-23s-2w, dr 1900 ft. Matthews & Derrington's Berry 1, nw nw se 14-35s-1e, dr 1227 ft. Wilson et al's Clark 1, csl nw 15-35s-1w, dr 355 ft. Craft & Wilson's Nevitt 1, ne nw ne 36-32s-2e, dr 1500 ft. Pryor & Lockhart et al's Knowles 1, sw sw sw 30-30s-1e, mim. The Texas Co.'s Reed 1, ne se se 11-31s-1w, mim.

TREGO COUNTY—Continental Oil Co.'s Holcomb 1, ne se nw 26-11s-23w, td 3654 ft, 900 ft oih 9 hrs. Central Commercial's Wagg 1, nw nw se 17-13s-21w, td 3908 ft, 1000 gals acid, no test. Hall et al's Heines 1, se se se 12-13s-24w, mim.

WOODSON COUNTY—Max Reynolds' Guy 1, ne ne se 29-25s-14e, sd 1400 ft. Sheedy's Baker 1, se se nw 2-26s-14e, dr 1527 ft.

## SOUTH LOUISIANA

ACADIA PARISH—Magnolia's Homeseekers 1, Esterwood prospect, sec 54-10s-1w, fsh 1685 ft.

ALLEN PARISH—Humble's J. A. Bel 1, Reeves prospect, sec 28-6s-7w, dr shale 2175 ft.

AVOYELLES PARISH — Front Oil Co.'s Hinds Lbr. Co. 1, sec 3-3n-4e, dk.

CAMERON PARISH—Magnolia's A. Hebert 1, ½-mi e of discovery well, Big Lake field, sec 13-12s-9e, ru.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Pigneur 274, Jefferson Island Dome, 12s-5e, to perforate sand showing oil at 7400 ft.

JEFFERSON DAVIS PARISH — J. K. Lewis' Lock Moore 1, Lock Moore prospect, sec 32-7s-6w, abn 7095 ft. Shell's Lacassine 1, Hayes prospect, sec 20-11s-5w, dr shale 8586 ft.

ST. JAMES PARISH—Shell's Colonial Sugar 1, Convent prospect, sec 5-12s-5e, dr sandy shale 6444 ft.

ST. MARTIN PARISH—Texas Co.'s Lake Mongouloi 2, Lake Mongouloi salt dome, sec 14-10s-9e, lcn. Same operator's St. Martin Land Co. 8, Henderson prospect, sec 9-8s-7e, dr water sand 7773 ft.

WEST FELICIANA PARISH—Robert L. Morris' Percy 1, sec 89-1s-4w, dr shale 5902 ft. Southern Minerals Corp. 1, sec 54-1s-4w, fsh 1185 ft.

## NORTH LOUISIANA

BIENVILLE PARISH — Rondeau et al's Locke 1, ne nw ne 9-15n-10w, rur, elev 180 ft. Walters et al's Davis 1, 3-16n-9w, mim.

BOSSIER PARISH — Bowman-Tidwell's Nattin 1, 15-22n-14w, owdd, td 66 ft. Humphreys et al's Bulkley 1, 36-21n-13w, elev 212.3 ft, arr dr plug in 8-in csg and test, td 2306 ft. United Gas Pub. Serv. Co.'s Murff A-1, 17-17n-11w, elev 201 ft, top anhydrite 3585 ft, dr 4712 ft, lime and shale.

CADDO PARISH — Pyramid O&G Co.'s Wheeler A-1, 16-18n-16w, elev 250 ft, top anhydrite 3783 ft, cemtd 9⅝ in csg 3950 ft, td 3956 ft.

CLAIBORNE PARISH—Sugar Creek Synd. et al's Darrett 2, 31-20n-5w, 9⅝ in csg 4588 ft, tested est 20 mil ft gas 5660 ft, tested 32 thribbles mud and sw in 18 minutes 5870-5980 ft, dr 6007 ft lime and shale. Kilpatrick 1, sw ne 7-19n-5w, coring 5039 ft lime and shale. E. T. Oakes et al's Patton Est. 1, 1-20n-5w, arr junk hole at 4238 ft and drill new hole.

DE SOTO PARISH—Larkin & Waar's Jackson 1, 1-11n-14w, elev 329.4 ft, top first stringer anhydrite 4670 ft, dr anhydrite stringer 4679 ft. Alexander et al's Stell 1, 5-12n-16w, temp abn, td 6002 ft. C. H. Smith et al's Whitney Corp. 1, 19-10n-13w, sd 1590 ft.

FRANKLIN PARISH—S. C. Jensen's Bailey 1, 12-11n-3e, 9⅝ in csg 206 ft.

JACKSON PARISH—Caldwell L&T Co.'s Burroughs Est. 1, ne nw 1-17n-1w, set surf csg, sd.

LINCOLN PARISH — Ark.-La Gas Co.'s Causey 1, nw ne nw 32-19n-2w, elev 341 ft, base Annona chalk 2632 ft, top Wolf City 2644 ft, top anhydrite 3921 ft, dr 4598 ft. Lide & Greer's Simmie Gardner 1, 10-17n-4w, elev 268 ft, top red beds 3810 ft, top first anhydrite 4580 ft, dr massive anhydrite 4806 ft.

MOREHOUSE PARISH—Henry E. Rondeau et al's Clark 1, se ne 10-20n-7e, elev 90 ft, rur.

NATCHITOCHES PARISH—Roy Raines et al's Raines 1, sw sw 28-9n-10w, co td 4303 ft.

RAPIDES PARISH—Amerada Pet. Corp.'s Weil 3, 52-1n-2e, dr 1800 ft. Texas-Eagle Oil Corp.'s State 1, 5-1s-2e, arr deepen 90 ft. Texas Co.'s Weil 1, 52-1n-2e, lcn; Weil 2, 53-1n-2e, tested 750 ft oil thru ¼ in choke with 100 lbs. gas pressure in 10 minutes 5737-57 ft, woc.

RED RIVER PARISH—I. J. Allen's Franklin Realty Co. 1, ne ne 20-11n-9w, spd. H. D. Conley et al's Long-Bell 1, 19-13n-9w, mim.

SABINE PARISH—Keen et al's Long-Bell 1, 5-8n-13w, mim. Laurel Pet. Co.'s Whitney Corp. 1, 8-9n-13w, mim (5500 ft test). A. H. Tarver's Baker 2, 36-8n-12w, elev 347.5 ft, top Zwolle marl 2205 ft, fsg td 5225 ft.

TENSAS PARISH—H. M. Jones' Chicago Mill & Lbr. Co. 1, 30-12n-10e, 10-in csg 208 ft, dr 479 ft Jackson.

UNION PARISH—Lent, Sears and Bocher's Frost Lbr. Co. 1, nec 27-21n-1e, elev 198.3 ft, sd 3247 ft sandy lime.

WEBSTER PARISH—J. P. Evans' Crichton 1, 35-18n-9w, elev 214 ft, top first anhydrite 4700 ft, dr 4954 ft, hd shale and lime. Ohio Oil Co.'s R. L. Holloway 6, ne sw 23-21n-10w, coring 7038 ft; Coyle 1, s½ se 23-21n-10w, rur. Red Hawk Oil Co.'s Baker 1, se nw 9-23n-9w, rur.

## MICHIGAN

ALCONA COUNTY—Thalman & Morris' Kohlman 1, 26n-7e-10, test 3050 ft. Joseph Langloh's Kurrasch 1, 27n-8e-10, lcn.

ARENAC COUNTY—Arenac Oil Co.'s Griffin 1, 19n-5e-1, sd 110 ft. Redman Oil Co.'s Kahayda 1, 20n-3e-9, dr 1600 ft. Ernest Snyder's Clikey 1, 20n-6e-8, rig.

ALPENA COUNTY—C. W. Teater's Nevins 1, 32n-6e-18, sd 60 ft.

BAY COUNTY — T. F. Caldwell, Inc.'s Krauss 1, 18n-3e-12, dr 700 ft.

CLINTON COUNTY—Stork Oil Co.'s Bross 1, 8n-2w-29, dr 1500 ft. Petroleum Exploration Co.'s Cable 1, 5n-2w, se ne se-12, rig.

CHIPPEWA COUNTY—F. D. Barton's Kretan 1, 41n-7e-17, sd 280 ft.

CLARE COUNTY—Fred Seigle's Fee 1, 17n-15w-26, sd 1165 ft.

CRAWFORD COUNTY—T. F. Caldwell, Inc.'s Huston-Lincoln 1, 25n-2w, nw sw sw-7, lcn.

GLADWIN COUNTY — T. F. Caldwell, Inc.'s Parker 1, 18n-2w-21, dr 500 ft. Mammoth Pet. & Ref.'s Mellinger 1, 18n-2w-35, dr 1000 ft. Chas. Bell's Ross 1, 18n-2w-34, csg 8-in 1045 ft.

EATON COUNTY—Burris & Keeler's Moon 1, 2n-4w-11, wo csg 2300 ft.

HURON COUNTY—Wallace Markle's Opaka 1, 15n-11e-4, fsh 2910 ft.

IONIA COUNTY—Frank Lyon's Geiger 1, 8n-8w-29, dr 900 ft. Terry Dale's Tew 1, 6n-7w-12, dr 740 ft.

ISABELLA COUNTY — Pure Oil Co.'s Keeler-Mitchell 1, 14n-6w-10, dr 3400 ft; Comstock 1, 13n-6w-15, dr 790 ft. Geo. Hanner's Dargitz 1, 13n-6w-15, dr 2200 ft.

KENT COUNTY—Rex Oil Co.'s Johnson 1, 10n-1w-36, dr 2600 ft. James Barton's Smith 1, 10n-10w-29, fsh 750 ft. Mich. Exploration's Croff 1, 7n-9w-35, dr 1400 ft. Associated Pet. Co.'s Plank 1, 9n-10w-29, dr 1000 ft.

LENAWEE COUNTY — Socony Vacuum's McCarberry 1, 5s-5e-36, fsh 2552 ft. Mott & Denman's Huffman 1, 6s-3e-26, dr 970 ft.

MIDLAND COUNTY — J. V. Wicklund's Roher 1, 16n-1w-7, sd 3540 ft.

MONTCALM COUNTY—John F. Martin's Christensen 1, 10n-6w-20, dr 400 ft. Old Dutch Oil Co.'s Russell 1, 10n-6w-27, dr 1600 ft. Rowmor Oil Co.'s Tow 1, 10n-6w-36, rig. Terry Dale's Higgins 1, 9n-8w-13, rig. Jetter Oil Co.'s McCracken 1, 9n-5w-6, dr 350 ft. Star Petroleum Co.'s Ward 1, 9n-5w-20, dr 2400 ft. Michigan Gas & Oil Co.'s Youngs 1, 9n-6w-1, dr 300 ft. W. E. Voss Tr.'s McDonagh 1, 10n-8w-23, rig. McClanahan Oil Co.'s Lincoln Nat. Life Ins. 1, 12n-5w-29, sp.

SAGINAW COUNTY — Smith Pet. Co.'s Morse Getty 1, 10n-6e-20, dr 1750 ft. Chas. Bell's Wagner 1, 11n-2e-10, Dundee 3116 ft, blk water 3210 ft, sd 3212 ft. St. Louis Pipe's Yadovack 1, 10n-2e-13, sd 2853, wo csg 5-in. J. H. Hibbard's Woodward 1, 10n-5e-22, rig. P. F. Caldwell, Inc.'s McDonogh 1, 10n-5e-19, rig. Mid-State's Burlson 1, 10n-5e-21, csg 5-in 2612 ft. B. J. Skinner's Sheldon 1, 10n-3e-11, dr 400 ft.

SHIAWASSEE COUNTY—Frank C. Cheer's Wilson 1, 6n-3e-34, sd 1900 ft. Cardinal Oil Co.'s Haviland 1, 5n-3e-31, dr 150 ft.

## MISSISSIPPI

CLAIBORNE COUNTY—Miss. Dev. Co.'s Crawford 1, 6-13n-4e, dr 565 ft gumbo.

LAMAR COUNTY—Snow-Black Pet. Co.'s Miller et al 1, ne ne sw 3-4n-15w, woc 10-in csg td 1446 ft.

WASHINGTON COUNTY — Mid-Continent Dev. Co.'s Lee 1, 1-14n-8w, arr deepen td 3016 ft.

WILKINSON COUNTY—Kirby Pet. Co.'s Lanehart 1, 22-1n-2w, rur.

## MONTANA

CARBON COUNTY — Bailey Round Butte Oil Co., cwl ne se 3-6s-22e, resuming at 1470 ft after changing to rotary equipment.

FERGUS COUNTY—Minnesota Co. (formerly Fenholt et al) Fenholt 1, se nw sw 24-21n-17e, dr 1097 ft. Judith Operating Co. Government 2, nw ne 35-22n-17e, dr 589 ft.

GLACIER COUNTY — L. P. Jackson and Stanley Gray Dunbar 1, nw se nw 22-34n-7w, dr 691 ft.

PONDERA COUNTY—Texas Co. 1 Unit-1, cnw se 32-31n-5w, spd. Norden Corporation Hollan 1, nw nw nw 12-28n-6w, dr 726 ft. Gordon Campbell 1, sw sw se 12-27n-3w, ru.

## NEW MEXICO

CHAVES COUNTY—Tannehill et al Campbell 3, cne se 1-11s-25e, dr 935 ft.

EDDY COUNTY—T. J. Haley et al Rose 1, cne ne 28-24s-27e, hole filled with water at 2313-43 ft. Etz Bros. State 2, cnw sw 16-17s-30e, hole full of oil at 2075-2105 ft. Premier Oil Co. Dexter 2-E, csw ne 20-17s-30e, dr 2460 ft. Ohio Oil Co. State-McCullough 1, csw sw 16-17s-30e, dr 2772 ft. D. & B. Oil Co. Berry 1, cne nw 21-7s-30e, dr 1470 ft. Dooley &-Dixon Commerce 1, cnw nw 18-20s-27e, dr 470 ft. Tignor, Et & Keyes, Keyes 1-B, cse sw 3-17s-28e, sd 885 ft. Red Lake Oil Co. State 5, cne sw 22-17s-28e, dr 449 ft. Tex Patillo Thompson 2, cne ne 1-20s-28e, dr 915 ft.

LEA COUNTY—Amerada's Chas. H. Weir 1-B, c sw ne 26-19s-36e, dr 3290 ft. C. & G. Oil Co.-The Texas Co.'s Ellen Weir 1, c ne ne 14-20s-37e, sp. Conoco and California Co.'s E. M. Elliott 1, c sw sw 22-22s-37e, elev 3347 ft, dr 1300 ft. Culberson-Irwin & Roy Stovall's J. B. Humphreys-Humble 1, c se sw 3-25s-37e, elev 3135 ft, top anhydrite 1030 ft, top salt 1124 ft, show o&g, dr 3270 ft; J. R. Stuart-Repollo 1, c sw se 10-25s-37e, elev 3105 ft, base salt 2400 ft, flows by heads, dr by tools, td 3296 ft. Gulf Oil Corp.'s A. B. Reeves 1, c nw sw 29-20s-37e, dr 2385 ft; Eunice A. King 1, c sw nw 28-21s-37e, lcn. Landreth Prod. Corp.'s E. H. Grizzell 1, c se sw 5-22s-37e, sp. Humble's W. B. Farrell 1, c sw se 22-22s-37e, lcn. Harry W. Leonard et al's B. T. Lanehart-Humble 1, c sw ne 21-25s-37e, elev 3079 ft, top anhydrite 965 ft, tested 4,000,000 ft gas and 25 bbls oil spray from sandy-lime 2975-79 ft. Liberty Oil & Drl. Co.'s J. F. Hair-Repollo 1, sw sw se 24-24s-37e, elev 3157 ft, show oil 3020-40 ft, dr 3055 ft. Magnolia's Will Cary 1, c ne se 21-22s-37e, mim. Maljamar O&G Corp.'s M. E. Baish 6, c nw se 21-17s-32e, Maljamar area, elev 4028 ft, dr 3860 ft. Ohio Oil Co.'s Turner 1, c ne se 29-21s-37e, mim. Oil Well Drl. Co.-Southern Pet. Exploration, Inc.'s State 1-A, c sw ne 29-19s-37e, elev 3619 ft, dr 3630 ft. N. G. Penrose and Rowan-Nichols Oil Co.'s Will Cary-Humble 2, c ne sw 22-22s-37e, elev 3345 ft, dr 1355 ft; Cary-Humble 3, c se nw 22-22s-37e, rotary rig. Plains Production Co.'s R. L. Mosley-Repollo 1, c nw se 34-24s-37e, elev 3168 ft, top anhydrite 1000 ft, sd in sulphur w 3550 ft; Geo. Smith-Humble 1, c se se 4-25s-37e, elev 3174 ft, dr 3025 ft; Repollo Oil Co.'s E. H. Bolding 1, nw nw nw 10-20s-37e, elev 3551 ft, dr 2055 ft; M. J. Boyd 1, swc n½ 23-22s-37e, elev 3337 ft, dr 3065 ft; A. L. Christmas 1, ne ne ne 28-22s-37e, elev 3344 ft, cem cas 3350 ft; R. M. Jones 1, nwc se nw 35-22s-36e, elev 3526 ft, fsh dp 3000 ft; W. C. Roach 1, nw nw nw 21-20s-37e, elev 3530 ft, cem 9⅝-in cas 2500 ft; J. H. Williams 2, sw sw se 33-19s-37e, elev 3568 ft, dr 3100 ft. Rowan Drl. Co.-Barney Cockburn's H. G. Mattern 1, c se sw 7-22s-37e, sp. Samedan Oil Corp.'s C. U. Parks 1, sw sw sw 14-22s-37e, elev 3339 ft, dr 2150 ft. Skelly Oil Co.'s A. L. King 1, c se nw 4-23s-37e, elev 3331 ft, top pay 3562 ft, co after shot 270 qts at 3503-3683 ft; B. L. King 1, c sw se 32-22s-37e, elev 3369 ft, sandy-lime pay 3624-3680 ft, co after shot, est 45 bbl pumper. Sun Oil Co.'s A. D. Richards 1, c ne se 6-23s-37e, elev 3369.7 ft, dr 2910 ft; W. W. Weatherly 1, c ne sw 17-21s-37e, elev 3485 ft, dr 1630 ft. The Texas Co.'s W. T. Lanehart 1, c ne¼ 29-25s-37e, elev 3031 ft, cem 7-in cas 2460 ft, dr 2640 ft. Tide Water's Anna Walden 1, c se ne 21-22s-37e, mim. Warren L. Todd, Inc. et al's Lemon 1, c nw se 17-21s-32e, elev 3630 ft, top anhydrite 990 ft, salt series 1132-3260 ft, sdo 3752 ft.

## OKLAHOMA

ALFALFA COUNTY—Tex-O-Kan's Acre 1, csw ne 14-24n-11w, temp abnd.

ATOKA COUNTY—Vierson et al's Williams 1, ne sw nw 34-2s-10e, td 4930 ft, D&A.

BECKHAM COUNTY—Wood Pet. & Royalty Corp.'s Blair 1, nw nw se 32-9n-26w, co 2763 ft. Carter Oil Co.'s Davidson 1, cnw sw 2-9n-25w, dr 2650 ft. Sneed & Barker's Stephens 1, **sw sw nw 19-9n-22w, lcn abnd.**

BRYAN COUNTY—Trio Oil Co.'s Gilbert 3, csw 25-8s-7e, mit.

CADDO COUNTY—Denver P&R Co.'s Sah-Cam 1, cse se 33-10n-10w, recovered crowbar, dr window in pipe at 7900 ft.

CARTER COUNTY—Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, td 8105 ft, flowed 3309 bbls oil. Carter Oil Co. et al's Leon Voorhees 1, cse sw 34-5s-2w, coring 2875 ft. The Texas Co.'s Cathey 1, se ne ne 6-5s-1w, td 4191 ft, pb to cement core.

COAL COUNTY—Shell Pet. Corp.'s Hill 1, se se nw 30-3n-10e, coring 5530 ft.

COMANCHE COUNTY—Meiling's Miller 1, ne ne sw 23-4n-12w, sd 902 ft. George Pace et al's Spencer 1, sw sw sw 21-3n-10w, td 4164 ft, pb 1850 ft, 1 million ft gas, comp.

GARFIELD COUNTY—Sherry et al's Hoken 1, nw nw sw 32-20n-4w, fsg 6240 ft. Stanolind-Amerada's Brunken 1, sw sw ne 32-23n-4w, coring 5949 ft.

HARMON COUNTY—Ioalko Trust, Ltd"s Crasnoe 1, se se sw 14-3n-25w, dr 780 ft.

HUGHES COUNTY — Schumacher et al's Schumacher 1, ne nw ne 23-5n-10e, running 2-in tubing with packer at 1782 ft. Canavan's Meadors 1, ne se sw 5-8n-10e, flowed 20 bbls oil. Phillips Pet. Co.'s Eberle 1, ne ne sw 12-5n-9e, coring 4348 ft. Sivils et al's Montgomery 1, nw sw nw 7-9n-9e, dr 2900 ft. George Orr et al's Morgan 1, ne se sw 6-7n-9e, cellar and pits.

JACKSON COUNTY—Jackman's Fee 1, sw sw sw 27-1s-24w, sd 2528 ft. Burnham's Oliver 1, nw nw se 26-1n-20w, td 1352 ft.

JEFFERSON COUNTY—Campbell's Trout 1, se ne ne 6-8s-7e, sd 1694 ft. George Pace's Gardner 1, sw sw sw 23-5s-5w, sd 2532 ft. Reno Oil Co.'s Gaun 1, se sw ne 35-6s-4w, dr 1920 ft. Heydrick's Peoples National Bank 1, sw sw sw 26-6s-5w, lcn abd.

JOHNSTON COUNTY—Moore & Wirick's Westheimer & Daube 1, se nw ne 19-3s-4e, dr 3030 ft. Magnolia Pet. Co.'s Welch 1, ne ne ne 12-2s-7e, dr 399 ft.

KAY COUNTY — Black Gold Pet. Co.'s Cooley 1, ne nw sw 25-28n-4e, td 2214 ft, D&A. Allen & Texas Co.'s Fulton 1, se se se 18-27n-4e, br.

LOGAN COUNTY—Stanolind-Amerada & Eason's Gragg 1, sw sw ne 20-18n-4w, initial prod 1045 bbls oil and 40 million ft gas, si.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, dr 7140 ft. Russell et al's Scott 1, sw se sw 29-8s-2e, sd 4968 ft. Amerada-Stanolind's Westheimer & Daube 1, sw se sw 27-6s-2e, dr 7008 ft.

MARSHALL COUNTY — Singley et al's Halford 1, se sw sw 22-7s-4e, sd 515 ft. Smith's Chestnut 1, ne ne ne 23-8s-5e, sd 500 ft. Helmerich & Payne's Taliaferro 1, nw se sw 36-5s-5e, lcn.

McCLAIN COUNTY — Arab Pet. Corp.'s Autry 1, nw nw nw 16-7n-3w, td 8204 ft, lost 16½ joints dr pipe 506 ft off bottom, dr by fsg 150 ft off bottom.

McCURTAIN COUNTY — Louis Sykes' Mitchell 1, cnw sw 12-9n-26e, rur.

McINTOSH COUNTY—I. T. I. O. Co.'s Toncred 1, sw nw se 9-9n-14e, dr 3945 ft.

NOBLE COUNTY—Continental Oil Co.'s Pruitt 1, nw se sw 19-20n-1w, dr 4665 ft.

OKFUSKEE COUNTY—Champlin Ref. Co.'s Thompson 1, sw sw nw 7-13n-8e, ru cable tools.

OKLAHOMA COUNTY—Hollenback et al's Cooper 1, nw nw ne 15-11n-1e, dr 4070 ft.

OSAGE COUNTY—Elfred's Beck 1, se se ne 6-23n-7e, dr 810 ft. Midco et al's 1, nw nw se 11-23n-6e, mach. Champlin Ref. Co.'s 1, sw sw ne 35-25n-6e, br. Stoner Bros.' 1, nw ne sw 18-22n-8e, lcn. Gray & Tolson's 1, sw sw ne 33-25n-7e, lcn.

PONTOTOC COUNTY — Mid-Texas Pet. Co.'s Whitney 1, sw sw se 30-5n-4e, td 1946 ft, pumped 83 bbls oil 6 hrs. Sandback et al's Sands 1, ne ne ne 20-3n-5e, td 380 ft, co 375 ft. Shaw's Illinois Bankers Life 1, nw se nw 1-4n-5e, dr 2386 ft.

POTTAWATOMIE COUNTY—Gulf Oil Corp.'s Bois-Clark 1, sw se se 21-6n-4e, td 3835 ft, wocs.

SEMINOLE COUNTY — Amerada et al's Community Stout 1, ne ne sw 3-10n-5e, coring 4438 ft. Imperial Drlg. Co.'s Aldridge 1, sw ne nw 32-9n-8e, td 1987 ft. Arkansas Royalty Co.'s Kiker 1, se se ne 9-10n-7e, sd. Sinclair Prairie et al's Harrison 1, ne ne nw 17-8n-8e, dr 2434 ft.

STEPHENS COUNTY—Endicott et al's Mc-


# Do You Know About This ABERCROMBIE SHEAR-RELIEF VALVE?

**HOW IT'S SET**

**Decide at what pressure you want the valve to relieve. Then consult the pressure guide on valve name plate to see what size nail shears at that pressure. Check size in nail gauge on name plate. Insert nail, as shown here.**

**HOW IT WORKS**

**If pump pressure against valve piston reaches set point the nail shears, releasing piston which moves entirely out of path of flow through side outlet. Valve design positively prevents any damage except to sheared nail.**

Low pressure type (shown above), for gathering pump or similar service, built in 250 to 1000-lb. range. High pressure type, for slush pump service, built in 1000 to 2750-lb. range. Write for descriptive literature, or refer your 1936 Composite Catalog.

FLUID-PISTON SLUSH PUMPS
ABERCROMBIE PUMP CO.
GULF BLDG. HOUSTON TEX.

Fatridge 1, nw nw sw 11-3s-9w, dr 1054 ft. Clyde Rhodes et al's Doak 1-A, sw sw sw 1-1s-5w, sd 1803 ft.

TILLMAN COUNTY — Gulf Oil Corp.'s Wearmouth 1, se nw se 31-1s-16w, dr 4437 ft. Smith's Hammill 1-A, ne nw nw 6-5s-15w, sd 495 ft.

## EAST TEXAS

ANDERSON COUNTY—Burke Bros. et al's S. G. Moore 1 (36.3-ac), J. C. Rosson sur, Camp Hill area, lcn. Tide Water & Seaboard Oil Corp.'s S. & I. Murray 1 (315-ac), S. Sanchez sur No. 2-10, Long Lake area, dr 5045 ft.

BOWIE COUNTY—Woodley & Bentley's J. D. Lumpkin 1 (245-ac), John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, Annona chalk 1665-2090 ft, sd 3200 ft. Ben J. Russell et al's O. A. Hall 1, J. W. Weaver sur, 9 mi sw New Boston, elev 316 ft, top Annona chalk 1646 ft, sd 3424 ft.

CASS COUNTY—American Liberty Oil Co.'s Marcus Rambo 1 (86.9-ac), J. H. Rives sur, Rodessa area, elev 249.2 ft, top Red Beds 3330 ft, dr 4600 ft; D. A. Maxcy 2 (86-ac), John Collum sur, dr 280 ft, Maxcy 3, lcn. R. W. Norton, Tr.'s Mary Rives 2 (85-ac), John Collum sur, Rodessa area, elev 225 ft, Annona chalk 1925-2475 ft, top Red Beds 3441 ft, dr 5350 ft; L. A. Haywood 2 (440-ac), P. Evans sur, elev 255 ft, cem cas 230 ft. Adair Heath et al's Moore Branch School 1 (2-ac), M. Reams sur, lcn. E. Key Jr. et al's C. M. Barkett 1 (2.74-ac), John Collum sur, lcn. United Production Corp.'s Eva Fields 1 and 2, John Collum sur, mim; J. T. Stewart 1, John Collum sur, mim. McElvain & Beckett's D. A. Maxcy 1, B. J. Murray sur, lcn. The Texas Co.'s E. E. Hall 1 (80-ac), Jas. Young sur, mim.

CHEROKEE COUNTY—R. L. Peveto, Howse & Mayo's C. R. Kelley 1, (east) Jose Pineda sur, 3 mi n Jacksonville, show gas 120 ft, cem 10-in cas 150 ft.

COLLIN COUNTY—Port Bolivar O&R Co.'s O. G. Durning-Clarkston 1-A (140-ac), Wm. Creager sur, Pat. 1193, elev 722 ft, sd 3866 ft.

FRANKLIN COUNTY—Ned B. Morris, Jr. et al's R. H. Harper 1 (4-ac), C. Payne sur, lcn. E. W. Rylander et al's B. J. Wells 1 (3¼-ac), J. K. Rogers sur, Talco area, lcn.

FREESTONE COUNTY—Tide Water & Seaboard Oil Corp.'s J. L. Johnson 2 (894-ac), H. Wheeler sur, Long Lake area, cem cas 347 ft. J. C. Yancey & Lovering's M. Scott 1, H. Awalt sur, No. 4, 7 mi n Fairfield, sp & sd.

GRAYSON COUNTY — Olson Drl. Co.'s-James Gardner et al's sw Life Insurance Co. 1 (160-ac), J. C. Jamison sur A-865, 3 mi n Pottsboro, elev 767 ft, Trinity series fr surface to 850 ft, Springer shale 850-1240 ft, Mississippian Caney shale 1240-4308 ft, fine grained sand 4308-4482 ft (with odor oil-gas 4441-82 ft), chert 4482-4637 ft, top Woodford shale 4637 ft, lost dp 4670 ft, pb to 3535 ft, drilled by junk, top Sylvan shale 4870 ft, Viola lime 4901-5096 ft, recovered junk, co cavings 5656 ft. Port Bolivar O&R Co.'s Creed Taylor 1 (160-ac), J. Fitzhugh sur, 3 mi se Gunter, sd 3931 ft.

GREGG COUNTY—John Hoover et al's T. G. Williams 1 (100-ac), David Hill sur, 3 mi ne Longview, elev 427 ft, Pecan chalk 2391-2985 ft, top Austin chalk 3447 ft, td 3860 ft, perf cas and tested dry, sdo.

HENDERSON COUNTY—Wm. McDougal, Tr et al's Elvira Price 1 (216-ac), M. Mathews sur, 4 mi s Trinidad, dk. H. M. Wilson et al's fee 1 (943-ac), Thomas Caro sur, 5 mi n Malakoff, elev 359 ft, top Pecan chalk 2300 (est) ft, sd 2800 ft.

KAUFMAN COUNTY—J. M. Scott and J. B. Woodside's E. Robinson 1 (80-ac), A. Chirnio sur, lcn.

LAMAR COUNTY—J. A. Forrester et al's J. S. Woodward 1 (18¾-ac), J. W. Woodward sur, 1½ mi e by s of Minter, elev 402 ft, top Georgetown lime 2256 ft, Paluxy sand with trace gas 3060-3144 ft, top anhydrite 3735 ft, base anhydrite 4075 ft, broken to 4105 ft, sd for repairs, td 4273 ft.

LIMESTONE COUNTY—C. F. Lytle et al's J. L. Thompson 1-T (141-ac), w side Mexia field, Trinity test, coring 5600 ft. Monte Oil Co.'s A. L. Rosson 1, blk 4, P. Lloyd sur, Nigger Creek area, 8 mi sw Mexia, Austin chalk 2540-2770 ft, top Woodbine 2840 ft, tested sw at 2847 ft, fsh 2952 ft.

MORRIS COUNTY — Raycotuck, Inc.'s P. M. Staggers 3 (40-ac), J. D. Nelson sur, elev 369 ft, top Pecan chalk 2525 ft, td 4140 ft, pb account crooked hole to 1500 ft, dr 2855 ft. Steve J. Rotundi et al's W. & C. Smith 1 (50-ac), M. C. Vela sur, 2½ mi sw Naples, top Navarro chalk 2258 ft, sdo 4105 ft.

NAVARRO COUNTY—Wm. A. Reiter et al's Dr. T. W. Bounds 1 (208-ac), HT&B Ry. sur, elev 427 ft, Austin chalk 2605-2975 ft, dry and abd in Woodbine sand section 3471-3655 ft. E. M. Thomason & Co., Inc's Estes Bros. 1 (58-ac), blk 11, Wm. Gilbert sur, 1 mi e Roane, elev 427 ft, top broken Austin chalk 1700 ft, top hard chalk 1750 ft, top Woodbine 2650 ft, dry and abd, td 2870 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Southern Pine Lumber Co. 1, D. D. Bruton sur, mim. Annona O&G Co.'s Leo & Otto Roberts 1 (200-ac), James Bankston sur, 2 mi ne Annona, elev 396 ft, Pecan chalk 40-380 ft, sd 725 ft. Midwest Pet. Co.-Texfornia Oil Co.'s Hocker-Hughes 1 (160-ac), MEP&P Ry. sur No. 642, 6 mi sw Lydia, sp and sd. Orr et al's Kurth Lumber Co. 1, Elizabeth Smith sur, 11 mi ne Clarksville, top Georgetown lime 600 ft, dr 920 ft.

ROCKWALL COUNTY—R. J. Sherman & Dodd's M. F. Lofland 1 (392-ac), W. H. Beard sur, 2½ mi se Rockwall, sd 750 ft. W. H. Carlin et al's W. H. Lofland 1 (54-ac), M. B. Jones sur, ¾ mi w Rockwall, rig.

RUSK COUNTY—McCallum et al's E. C. Gary 1 (265-ac), John Piburn sur, 5 mi s Henderson, elev 338 ft, Pecan chalk 2448-2715 ft, top Austin chalk 3224 ft, sd 3440 ft. Pure Oil Co.'s W. H. Faulkner 1 (60-ac), Wm. Elliott sur, 5 mi e Mount Enterprise, Trinity sand or 8500 ft test, elev 563 ft, Pecan chalk 2650-2890 ft, show gas when fault cut, top broken Austin chalk 3286 ft, top hard chalk 3321 ft, dr 3360 ft. J. W. Shipman et al's Citizens Nat'l Bank (L. T. Burton) 1-A (125-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, top Pecan chalk 2355 ft, sd 3510 ft.

SMITH COUNTY—W. L. Cloud et al's Dora Kendall 1-A, John Williams sur, 3 mi e Van field, sd 1290 ft. K. & Grant Colby and A. G. Thompson's W. P. Walsh 1 (335-ac), Samuel Barnett sur, 6½ mi ne Tyler, elev 395 ft, temp abd, td 1171 ft. Kelso & Thompson (was Winona Oil Corp.'s) McClung 1 (23½-ac), E. Newberry sur, 1 mi e Winnona, elev 449 ft, Pecan chalk 3335-3660 ft, sd 3750 ft.

TITUS COUNTY—Jules Alford, Tr. et al's W. D. Fry 1, Isaac P. Stern sur, 1½ mi se Talco, elev 319 ft, top Georgetown lime 3550 ft, fsh 4340 ft. L. B. Culberson et al's E. Unsell 1, center lot 1, Talco townsite, lcn Leland Fikes et al's Talco Townsite Co. 1 (100-ac), M. V. Delgado sur, lcn. Humble's Mary B. Grove 1 (82.9-ac), Ben Jones sur, 1¾ mi e Talco, elev 309 ft, Pecan chalk 1591-1733 ft. Eagle Ford shale 2862-3240 ft, top Woodbine 3240 ft, top Red Beds 3590 ft, top Georgetown lime 3991 ft, cem 8⅝-in cas 4475 ft, temp abd 4492 ft in lime; Grove 2 (1440 ft s No. 1), rig; Mrs. Myra Galt 1 (80-ac), R. Winn sur, A-622, elev 346 ft, Pecan chalk 1658-1785 ft, dr 3570 ft. Jack Hearrell et al's E. Unsell 1, c lot 16, blk 6, Talco townsite, lcn. C. M. (Dad) Joiner et al's Huernish Hrs. 1, Henry P. Banks sur, 12 mi e Talco, elev 317 ft, dr 1015 ft. Magnolia's C. M. Carr 1 (70-ac), M. V. Delgado sur, rotary rig. Ned B. Morris Jr., et al's W. H. Hughes 1 (6½-ac), M. V. Delgado sur, lcn. Owens & Porter's Christ Church 1, c lot 3, blk 25, Talco townsite, lcn. John T. O'Neal, C. M. (Dad) Joiner et al's O. C. Lilienstern 1 (80-ac), Wm. Gann sur, 5 mi se Talco, elev 302 ft, Pecan chalk 1375-1572 ft, top Georgetown lime 3560 ft, top Paluxy sand 4360 ft, sdo 4496 ft. Allen M. Peairs et al's fee 1, c lot 1, blk 30, Talco townsite, lcn. S. G. Reed & R. S. Barnswell's U. Shaw 1 (7⅛-ac), Talco townsite, lcn. G. L. Tatum & D. H. Dunbar's J. Easterling 1, c lot 6, blk 16, Talco townsite, lcn. G. H. Vaughn Prod. Co.'s S. G. Belcher 1 (80-ac), I. P. Stern sur, lcn.

UPSHUR COUNTY—Joe A. Papadakis et al P. K. Williams-Cone 1, lot 5, blk 5, J. P. Justamente sur, elev 396 ft, rig.

SHELBY COUNTY—O. D. Clark Dev. Co.'s Herton 1, J. Dowlin sur, sd 1508 ft. Farley & Sommers' W. C. Windham 1, Wm. Leach sur, washing td 3268 ft. C. A. Parker's Windham 1, A. H. English sur, pumping wo gauge. Potter & Rimbley's O. H. Polley 1, Wm. Wisner sur, fsh 3050 ft. H. A. Stebbiuger's Pickering Lbr. Co. 1, C. F. Henry sur, arr perf csg td 3912 ft.

## WEST TEXAS

ANDREWS COUNTY—Fuhrman Pet. Corp.'s W. H. Boner 3-B, nw¼ sec 25, blk A-43, PSL sur, elev 3197 ft, top anhydrite 1740 ft, top salt 1770 ft, lime pay 4285-4504 ft, shot 460 qts nitro 4280-90 ft, i.p. 601 bbls; W. T. Ford 4, sec sec 16, blk A-43, PSL sur, mim. Humble's R. M. Means 7, c se se sec 15, blk A-20, PSL sur, mim; J. M. Spinks 1, c sw se sec 13, blk A-20, PSL sur, Means area, elev 3172 ft, top anhydrite 1930 ft, top salt 1985 ft, show oil 4514-4521 ft, cem 7-in cas 4250 ft. J. W. Tripplehorn et al's A. R. King 2, nec n½ nw¼ sec 11, blk A-46, PSL sur, elev 3196 ft, i.p. 287 bbls oil and 7 bbls w from lime 4370-4382 ft.

BREWSTER COUNTY—Floyd C. Dodson et al's Texas American Synd. 1-A, c ne ne sec 66, blk 10, GH&SA Ry. sur, deep test, elev 4228 ft, lowering 15½-in cas, td 1305 ft.

COCHRAN COUNTY—Honolulu Oil Corp-Cascade Pet. Co.'s T. B. & R. F. Duggan 1, Labor 13, League 55, Oldham County School Land sur, rig.

CONCHO COUNTY — Maverick Oil Co.'s Jim Rice 1, sec 18, H&TC Ry. sur, elev 1887 ft, top Strawn 1603 ft, pb from 2454 ft to 1847 ft, fsh. Walter C. Nelson et al's Jim Rice 1, c nw sw sec 13, blk 70, H&TC sur, rig. John W. Westbrook Co.'s C. C. Ledbetter 1, sec 2, A-1673, blk 65, H&TC Ry. sur, elev 2000 ft, dr 2545 ft.

CRANE COUNTY—Big Basin Pet. Co.'s Jax Cowden 1, nec nw ne sec 77, blk "X", elev 2456 ft, top salt 548 ft, sd 2602 ft. Clark-Cooper & Smith's A. P. Jorden 1, nec 160-ac lse, sec 12, PSL sur, blk B-22, mim. A. R. Eppenauer and A. H. Livingston's fee 1, sec 13, blk 6, H&TC Ry sur, lcn for Ordovician lime test. Gulf's W. N. Waddell et al 2, c ne sw sec 18, blk B-21, PSL sur, rig. Gulf and T. B. Cranfill's J. B. Tubb 2, nec sec 12, blk B-27, PSL sur, rig. Loffland Bros. et al's J. B. Tubb-Gulf 1, c nw¼ sec 9, blk B-27, PSL sur, elev 2540 ft, top anhydrite 428 ft, salt series 495-1285 ft, top brown lime 2478 ft, sd 4510 ft. Humble O&R Co.'s J. B. Tubb 2, near c se nw sec 11, blk B-27, PSL sur, 200 ft. John I. Moore et al's T. C. Barnsley 1, c sw sec 43, blk 32, PSL sur, Ordovician lime test, elev 2472 ft, top anhydrite 500 ft, top salt 680 ft top brown lime 2355 or 2470 ft, show oil 2925-40 ft, dr 3070 ft, Sinclair Prairie and unit members' J. B. Tubb-California Co. 1, sec sec 3, blk B-27, PSL sur, elev 2540 ft, used 2000 gals acid in lime pay (broken) 2962-3164 ft, tested 3 bbls on pump, dr 3655 ft. L. R. Stroud et al's J. Mosley 1, sec 4, blk 31, H&TC Ry. sur, cem cas 518 ft. Riden et al's N. S. Thaxton 1, sec 2, W. T. Wilkenson sur, sp and sd.

CROCKETT COUNTY—J. W. Dieringer, B. C. Mann & E. M. Wahlenmaier's J. W. Robbins 1, sec 2, blk B, GC&SF Ry. sur A-5498, elev 2655 ft, top anhydrite 585 ft, top salt 660 ft, dr 1770 ft. Dr. J. G. Harris et al's O. W. Parker 1, sec 83, blk 1, I&GN Ry. sur, elev 2215 ft, dry and abd 2016 ft. John I. Moore et al's A. C. Hoover 1, sec sec 4, blk "FF," B&B sur, sd 650 ft.

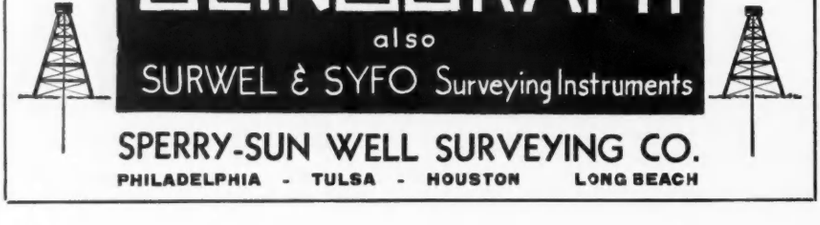
JEFF DAVIS COUNTY — C. M. "Dad" Joiner et al's Jones-Coffield 1, ne¼ sec 8, blk 3, H&TC Ry. sur, dr 3165 ft.

ECTOR COUNTY—Barnsdall Oil Co.-York & Harper, Inc's H. C. Foster 2, c sw sw sec 18, blk 43, T&P Ry. sur, T-2-S, elev 2936 ft, pb fr sul w at 4234-37 ft and shot, now co. W. H. Dunning, Jr. et al's H. E. Cummins 1, nec se¼ sec 33, blk 45, T&P Ry. sur, T-1-N, dr 2655 ft. Sun Oil Co.'s O. B. Holt 1-A, c sw sw sec 5, blk 43, T&P Ry. sur, T-1-N, elev 3108 ft, top main lime 3901 ft, passed up small oil flow at 4075-4350 ft, dr 4926 ft. Stanolind's E. F. Cowden 1-B, c ne ne sec 14, blk 43, T&P Ry. sur, T-2-S, Foster Pool, top anhydrite 1720 ft, top salt 1827 ft, dr 3915 ft.

EL PASO COUNTY—A. M. Blume et al's F. W. Cook 1, ne½ sec 321, S. F. No. 8134, elev 4013 ft, temp abd 560 ft. Tri-State Oil Co.'s Chas. & L. M. Kinkel 1, nec sec 237, S. F. No. 7232, sd 1975 ft.

FISHER COUNTY—Forest Devl. Corp.'s A. M. Dry 1, near c sw se sec 108, blk 2, H&TC Ry. sur, as 2170 ft. Tide Water and Merry Bros. & Perini, Inc.'s M. Howard 3, nwc se ne sec 180, blk 2, H&TC Ry. sur, dr 2580 ft.

GAINES COUNTY—Landreth Prod. Corp.'s W. H. Kirk 1, swc sec 22, blk A-21, PSL sur, dr 1560 ft. W. T. Walsh and Harry Adams

Corp.'s S. J. Averitt 1, nec ne ne sec 228, blk G, W. T. Ry. sur, elev 3322 ft, top anhydrite 1969 ft, top salt 2030 ft, show gas 2785-95 ft, top Yates sand 2920 ft, tested 12,368,000 ft gas in lime at 4890-4910 ft, temp complete with tools lost in hole.

GARZA COUNTY—Danciger Oil & Refineries, Inc's V. A. Hartman 1, sec 1401, E. L. RR sur A-294, lcn. M. L. Richards et al's Post Est. 1, nec se ne sec 6, blk 5, K. Aycock sur, elev 2528 ft, top lime 2300 ft, top lime pay 2802 ft, td 2823 ft, used 2000 gals acid and pumped 93 bbls oil 1st day and 60 bbls oil 2nd 24 hrs.

GLASSCOCK COUNTY—Fleetborn Oil Corp.'s F. C. Dodson 1, sec sec 13, blk 34, T&P Ry. sur, T-3-S, elev 2714 ft, top lime 2332 ft, passed up shows o&g, dr 2785 ft. Lucas Wal-drop et al's W. B. Currie 1, c ne ne sec 216, blk 29, W&NW sur, lcn. Bruce Frazier's E. Patterson 1, nwc sec 188, W&NW Ry. sur, blk 29, lcn. Shell's L. S. McDowell 1, sec 41, blk 34, T&P Ry. sur, T-2-S, lcn.

HOCKLEY COUNTY—The Texas Co.'s Bob Slaughter 1, League 38, Zavala C. S. L. sur, lcn.

HOWARD COUNTY—Southern Oil Corp.'s W. P. Edwards 1, swc sec 32, blk 30, T&P Ry. sur, T-1-S, dr 815 ft. D. C. Reed, B. A. Duffy & Jas. P. Nash's Walter Pike 1, c se se sec 24, blk 33, T&P Ry. sur, T-1-N, machine.

HUDSPETH COUNTY—Haymon Krupp Oil & Land Co.'s S. J. Thaxton 1, near sec ne se sec 34, blk 74, T&P Ry. sur, Tsp 6, dr by junk, td 893 ft.

JONES COUNTY—Bob Elmore et al's O. L. Caton 1, sw¼ sec 10, D&DA lands sur, sd to test show oil 1950 ft. Hal Hughes et al's R. D. Bumpass 1, (70-ac lse), T. Maltby sur, elev 1551 ft, dry and abd 2455 ft. Jamison, Pollard & Forster's G. B. Triplett 1, swc 100-ac lse, J. Goocher sur, elev 1680 ft, sd 2110 ft. Thos D. Humphrey's A. A. McDuff 1, se part 155-ac lse, sec 1, blk 17, T&P Ry. sur, dry and abd 2609 ft; J. M. Radford 1, sec 19, blk 16, T&P Ry. sur, sp. Ungren & Frazier's H. Woods 1, nwc sec 53, blk 15, T&P Ry. sur, dr 1075 ft.

LOVING COUNTY—Porter Rankin et al's W. D. Johnson 1, nw¼ sec 12, blk 57, T&P Ry. sur Tsp 1, elev 2904 ft, top Deleware lime 3119 ft, top sand 3151 ft, testing with 1700 ft fluid in hole, td 3176 ft. Mason Oil Co.'s Minnie Kyle 2, nec nw ne sec 17, blk 55, T&P Ry. sur Tsp 1, lcn abd.

MARTIN COUNTY—Woodley Pet. Co.-Kirby Pet. Co. & Boone Bros' F. A. King 1, nwc sw¼ sec 30, blk 35, T&P Ry. sur, T-1-S, top anhydrite 1450 ft, top salt 1545 ft, dr 2800 ft. Benedum-Trees et al (was Wm. Hix's) O. B. Holt 1 (5000-ac), League 319, Garza County School Land sur, lcn.

MENARD COUNTY—Wilcox O&G Co.'s Lee Murchison 1, swc sec 158, abst. 1840, elev 2190 ft, dr 1790 ft.

NOLAN COUNTY—N. B. Hall, A. Glenn et al's Georgia Tech 1, sw¼ sec 89, blk 24, T&P Ry. sur, elev 2330 ft, sd 200 ft. David Thomas, Ridgeway et al's Mrs. G. W. Cochran 1, ne¼ sec 113, blk 1, H&TC Ry. sur, lcn.

PECOS COUNTY—Cardinal Oil Co.'s White-Baker-Gulf 1, nec sec 1, blk 194, GC&SF Ry. sur, elev 2434 ft, dry and abd in sul w 1455-1458 ft. Dobbs Oil Co.'s J. M. Rooney 1, near c ne ne sec 12, blk 125, T&St.L. Ry sur, lowering cas, td 800 ft. Stanley A. Thompson et al's Elsinore Cattle Co. 1, se¼ sec 53, blk D, GC&SF Ry. sur, Ordovician lime test, sp. Trans-Texas Oil Co.'s Popham Land & Cattle Co. 1, se¼ sec 235, blk 11, GH&SA Ry. sur, sr 350 ft; C. M. Caldwell 1, sec sec 27, blk 50, T&P Ry. sur, Tsp 9, elev 2865 ft, so&g 3075 ft, pb fr sul w in lime 5280 ft to 4405 ft, used acid with no results,, dd to 5326 ft and dry and abd; Gallager 1, nec nw sec 9, blk 51, T&P Ry. sur, Tsp 10, sp and sd.

REAGAN COUNTY—F. Oyster, R. R. Rhodes & E. R. Bahan's M. H. Chase 1, c ne¼ sec 40, T&P Ry. sur, blk 36, T-5-S, lcn.

PRESIDIO COUNTY—Linderman Bros. Oil Corp.'s R. I. Bledsoe 1, swc ne sec 15, blk 351, GC&SF Ry. sur, sd 1635 ft.

RUNNELS COUNTY—Melrose Oil Co.'s Mrs. L. P. Wood 1, nwc 30-ac lse, Willett Holmes sur No. 100, dry and abd 2926 ft. Golden Pet. Co.-John Castor's H. Giesecke 1, blk 150, sub-div 3, Jas. Hughes sur, sp and sd.

SCHLEICHER COUNTY — Rowan-Nichols Oil Co. & Cardinal Oil Co.'s J. A. Whitten 1, c ne nw sec 35, blk L, TC Ry. sur, elev 2353 ft, dr 2898 ft. Mangus Oil Corp, (was W. C. Proctor et al's) Judkins-Spencer (Pure) 1, c sw¼ sec 4, GC&SF Ry. sur blk V-28, or Hooper-Wade sur, blk A, elev 2209 ft, show gas 4350-70 ft, dr 4995 ft.

SCURRY COUNTY—Coffield & Guthrie, Inc's W. A. Wade 1, nwc sec 115, blk 97, H&TC Ry. sur, elev 2306 ft, pb fr 3168 to 1820 ft, shot 150 qts 1745-1820 ft, complete as 30 bbls pumper; T. E. Sorrels 1, sec sec 10, H&TC sur, blk 97, sp. J. G. Bristow & R. H. Cantrell's Shannon-Magnolia 1, c nw¼ sec 331, blk 97, H&TC Ry. sur, elev 2552 ft, top anhydrite 848 ft, top salt 860 ft, dr 3110 ft.

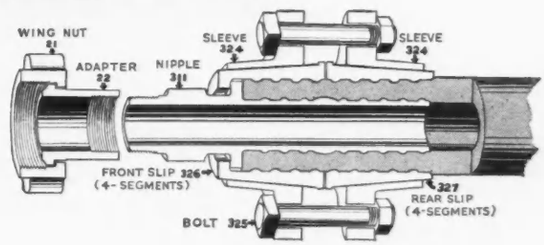
TAYLOR COUNTY—Hightower O&R Co.'s Mrs. E. E. Sadler 1 (475-ac), sec 31, C. Cole sur, dry and abd, td 2530 ft.

TERRELL COUNTY—F. C. Bates and J. H. Felps' J. H. Felps 1, sec nw¼ sec 5, G. W. Turley sur, blk A-4, elev 2185 ft, lost tools, sdo 5635 ft.

UPTON COUNTY—Greencliff Oil Corp.'s J. H. Tippett-Halff 1, c ne¼ sec 58, blk Y, TC Ry. sur, elev 2648 ft, top anhydrite 1254 ft, top salt 1312 ft, top Yates sand 2313 ft, dr 4285 ft. J. G. McKenzie et al's W. H. & L. M. Taylor 1, sec ne se sec 22, blk B-2, GC&SF Ry. sur, sd 630 ft.

WINKLER COUNTY—Crafton Oil Co. et al's J. B. Walton-Pure 2, swc ne¼ sec 1, blk B-3, PSL sur, lcn. Conoco's J. B. Walton 1, sec ne¼ sec 8, blk B-3, PSL sur, so&g 3341-60 ft, dr 3395 ft. Wm H. Dunning, Jr. et al's B. F. Jenkins 1, swc s½ s½ sec 21, blk 77, PSL sur, dk. Gulf's Keystone 12, nec sec 10, blk B-3, PSL sur, coring 3287 ft. Bert Fields et al's Oscar Clapp-Pure 1, nec ne¼ sec 26, blk 26, PSL sur, dr 500 ft. R. H. Henderson et al's J. B. Walton-Humble 1-A, nec sec 9, blk 26, PSL sur, elev 2873 ft, top lime 2658 ft, main pay 3034-3049 ft, est 400 bbls oil per hr, via cas, gauged 2306 bbls oil 24 hrs via tubing; Walton-Humble 1-B, sec sw¼ sec 10, blk 26, PSL sur, elev 2868 ft, top lime 2810 ft shot 340 qts nitro 2811-3044 ft, co and will make pumper. Fred Hyer et al's Cowden Cattle Co. 1, c nw¼ sec 8, blk A-56, PSL sur, top anhydrite 1230 ft, elev 3082 ft, top salt 1390 ft, dr 3800 ft. Humble & Tide Water's J. B. Walton 1-C, swc se¼ sec 21, blk 74, PSL sur, elev 2889 ft, top anhydrite 1180 ft, salt series 1363-2875 ft, top lime 2930 ft, dry and abd in sulphur w 3201 ft. Illinois Oil Co.'s J. B. Walton-Conoco 1, sec sw¼ sec 23, blk 26, PSL sur, est 8,000,000 ft gas at 2680-2714 ft, dr 2880 ft. C. M. Joiner et al's Cowden-R. M. Evans 1, near c nw¼ sec 46, blk 73, PSL sur, elev 3203 ft, top anhydrite 1580 ft, top salt 1640 ft, top Yates 2930 ft, sd 3128 ft. K. D. Oil Co.'s Pink Mitchell 1, nwc s½ ne¼ sec 23, blk B-10, PSL sur, elev 2814 ft, top anhydrite 1010 ft, top salt 1070 ft, sdo 1150 ft. Magnolia's J. B. Walton-State 1, nwc ne¼ se¼ sec 7, blk B-3, PSL sur, elev 2921 ft, top anhydrite 735 ft, top lime 2309 ft, tested 1½ mil ft dry gas after two nitro shots at 3105-3279 ft, pb fr sulphur w 3689-95 ft to 3645 ft, used acid and tested water, pb to 3600 ft, testing; State-Walton 2, nec sec 5, blk B-3, dk. W. L. & E. J. McCurdy's W. A. McCutcheon-Pure 1, swc sw¼ sec 16, blk 3, PSL sur, dr 1225 ft. Osmand-Crandall & Joe C. Maxwell's J. B. Walton-State 1, nwc sw¼ sec 27, blk B-3, PSL sur, top anhydrite 950 ft, top salt 1220 ft, dry & abd 3245 ft. Sinclair Prairie's J.


# Shaffer Welcomes High Pressure Rotary Hose!




**We welcome the advent of High-Pressure Rotary Hose. We are glad to see Rotary Hose that can "take it" like Shaffer Rotary Hose Couplings—an ideal combination to meet the severest demands of the oil industry.**

**The performance of Shaffer Couplings have pointed the way for high-pressure Rotary Hose—made it both possible and practical. Discriminating hose manufacturers urge the best in couplings—several of them have adopted the Shaffer Coupling.**

**Hose equipped with Shaffer Couplings is not dependent upon the bolts for safety factor—the pressure is applied to a solid centrifugal sleeve; in no way dependent upon the bolts against failure of coupling. All Shaffer Rotary Hose Coupling Nipples are thoroughly tested by hydraulic pressure against seepage and leaky castings before installation or shipment.**

**It will pay you to investigate Shaffer Rotary Hose Couplings—"They can take it." See Composite Catalog or write for literature.**

**THE SHAFFER SPECIALTY CO.**

BOX 136 WHITTIER STATION TULSA, OKLAHOMA 2440 EAST KING STREET

20 INCHES OF IRON Hardness

THE LAYNE RATCHET PACKER

That's the kind of Pack the Layne Improved Ratchet Packer gives.

This pack is obtained by tightly compressing the 42 inches of closely woven spirally wrapped canvas. The canvas is securely fastened at each end with numerous wire wraps and solder.

The Layne Packer requires no fingers or slips, to prevent creeping up in the casing when exposed to high pressure. It can be removed, easily by unscrewing the sleeve sufficiently to release the canvas pack.

The LAYNE & BOWLER CO.
HOUSTON · TEXAS


B. Walton 1, nec ne¼ sec 20, blk 77, PSL sur, completed flows 30 bbls daily after 220-qt nitro shot 3390-3500 ft. Reed & Duffy's J. Sealy 1, nwc sec 8, blk "A," GMMB&A sur, lcn. Sun Oil Co.'s Keystone 1, sec sec 3, blk 77, PSL sur, elev 2959 ft, top anhydrite 942 ft, top salt 1090 ft, top lime 2533 ft, dry and abd 4043 ft. Superior O&G Co.'s M. J. Hill 1, sec e½ sw¼ sec 18, blk 11, PSL sur, lowering cas 1390 ft. Wahlanmaier Pet. Corp. & Atlantic O. P. Co.'s J. B. Walton-Humble 1, sec sw¼ sec 34, blk 74, PSL sur, elev 2874 ft, top anhydrite 1160 ft, top salt 1440 ft, top lime 2640 ft, tools stuck, td 2883 ft.

YOAKUM COUNTY—Honolulu Oil Corp.-C. J. "Red" Davidson et al's L. P. Bennett-TP Coal & Oil Co. 1, c ne ne sec 678, blk "D," John H. Gibson sur, elev 3557 ft, top anhydrite 2424 ft, top salt 2535 ft, top Yates sand 3220 ft, top lime pay 5096-98 ft, sul w at 5112 ft exhausted, used 2000 gals acid on 3-16-36, dd to sul w at 5278 ft and pb to 5265 ft and shot with 370 qts nitro at 5078-5260 ft, co and swabbing and flowing 240 bbls 32.8 gravity oil daily. Lou G. Stogner et al's Goggins-Roosevelt 1, c ne¼ sec 215, blk D, John H. Gibson sur, rig. E. R. Bahan & R. R. Rhodes' Mrs. Alice Henard 1, c sw¼ sec 367, blk D, John H. Gibson sur, mim.

## TEXAS GULF COAST

BRAZORIA COUNTY—Gulf's Fairfield 1, Lochridge prospect, A. Robeson sur, dr shale 7422 ft. Texas Gulf Producing Co.'s Sparks 1, Angleton prospect, Wm. Roberts sur, dr rock 3927 ft. Strake Petroleum Corp.'s K. Poole 1, Poole Ranch prospect, W. Eggers sur, fsh 6642 ft.

CHAMBERS COUNTY — Glenn H. McCarthy's Pitt 1, Winnie prospect, J. M. Durran sur, dr shale 4177 ft. Salt Dome & Gem Oil Co.'s Lawrence 2, Cotton Lake prospect, S. Barrow sur, comp 21 bbls per hour 6651 ft.

GALVESTON COUNTY—Coastal Minerals Dev. Co.'s M. J. Joslin 1, Friendswood prospect, S. McKissick sur, dr shale 3150 ft. Sun's Hughes 1, Green Lake prospect, W. C. M. Baker sur, whipstocking 8374 ft.

GRIMES COUNTY—Crooks Brother's Greer 1, near Carlos, P. B. Connor sur, sd 268 ft.

HARDIN COUNTY—David B. MacDaniel's Nona Mills 1, Grisby prospect, E. Emanuel sur, dr shale 900 ft. Resource Prod. Co.'s Howeth 1, sw of Ariola, A. J. Cotton sur, woc 750 ft. Amerada-Stanolind's Esperson 1, Deer Park area, s of Ship Channel, G. N. Patrick sur, dr sand 4361 ft. Amerada-Stanolind's Dopsalus 1, Fairbanks-Satsuma prospect, W. C. RR. sur, blk 1, sec 2, woc 68 ft. Bunte et al's Adams 1, Cedar Bayou prospect, B. Barrow sur, dk. E. E. Young's Griffith 2, w of Humble, A. R. Bodeman sur, abn 4485 ft.

JEFFERSON COUNTY—Magnolia's Funchees 1, Cheek prospect, s of Amelia, HT&B sur No. 16, dr shale 4523 ft. Smith & McDannald's Grinell 1, n of Port Arthur, Grisby sur, abn 8834 ft. Sun's Broussard 1, Labelle prospect, B. Blackmon sur, sdtr 7380 ft.

LIBERTY COUNTY—Atlantic & Brace's E. E. Hardy 1, Hardin area, J. Robeson sur, sd 7549 ft, waiting on orders. Crown Central's Davis 1, n of Esperson field, D. Kokernut sur, dr salt water sand 4508 ft.

MATAGORDA COUNTY — Continental's Feife 1, Citrus Grove prospect, J. S. Chriswell sur, no report. Helmerick & Payne's Hawkins 1, Sheppards Mott area, D. R. McCarthy sur, pulling csg 7816 ft. H. M. Smith Corp.'s Wadsworth 2, Sheppards Mott area, S. R. Fisher sur, sd 1302 ft. Sun's Craig 1, e flank of Hawkinsville dome, T. Williams sur, sdtr 5236 ft. John Deering's Estill 1, Cedar Lane prospect, Tone & Jamison sur, dr salt water sand 6788 ft.

MONTGOMERY COUNTY — Chapman & Smith's Delta Land Co. 1, Dacus area, T. Sheppard sur, sd 4003 ft. Wm. Thompson's Scott 2, Dacus area, F. A. Wheeler sur, dr shale 1950 ft.

POLK COUNTY—J. T. Lightfoot's L. Davidson 1, ne of Corrigan, Houston County School Land sur, sd 3135 ft.

SAN JACINTO COUNTY — Gholson & Decker's Randolph 1, Evergreen area, Vital Flores sur, ru.

WASHINGTON COUNTY—W. D. Twichell et al's Hoxie 1, S. Clampit sur, sd 1501 ft.

WHARTON COUNTY — Pure's Paige 1, Blue Basin prospect, J. Pirie sur, washing to bottom 9200 ft. Sterling Oil & Refining Co.'s Genzer 1, East Bernard prospect, J. Scott sur, sd 720 ft.

## SOUTH TEXAS

ARANSAS COUNTY—Buckingham Oil Co.'s McCampbell 1, lots 8 and 9, sec 41; lots 8 and 9, sec 42, McCampbell Subd, James Orick sur, 2 mi nw of Aransas Pass, 8 ft fr San Patricio County lines, sands showed on electric formation test from 5425-7120 at 6534-46, 6819-24, 6900-07 ft, td 7501 ft, plugged back to 6545 ft, blew out while making dst, showed 2250 lbs pressure wet gas, oil from pits tested 35.5 gravity, now tearing down rig to move in new rig and comp.

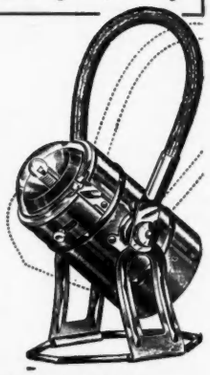
ATASCOSA COUNTY—R. C. Lee, Trustee (Atascosa Trust), U. A. Doumch 1, 152-ac tr, blk 10, J. T. Russell sur No. 1222, 3 miles n Poteet, dr 3246 ft. W. B. Hinton's Weigand 1, in Donovan sur No. 145, lcn. R. McIntyre's (Cliff Oil) San Antonio Joint Stock and Land Bank (H. A. Billinck) 1, J. B. Woodleff sur No. 246, 7½ mi e Coughran, sd 3185 ft, elev 341 df.

BASTROP COUNTY—Franklin et al's Batty Lawhon 1, Standifer sur, sw of Elgin, abnd. Howell & Appleton's Herman Klemm 1, Richard Teal sur, sd 1229 ft. Marts & Beavens' Parkford & Jenkins 1 in center of lot 24, Bastrop Town tr, mim. J. E. Mills' C. O. Randle 1, 100-ac tr in B. Brymer sur, td 2266 ft, reaming to run csg, oil show in chalk 2238-66 ft.

BEE COUNTY—The California Co.'s W. A. Boothe 1, 100-ac tr, A. Walker sur, one mile e of Mineral, top Pettus 3936 ft, coring in and will make dst. Geo. M. Church et al's G. A. Ray 1, Anna Burk sur, 2 mi e Beeville, dr 2740 ft. Marine Oil Corp.'s Webb-Hearn 1, in 92-ac lease, E. Ryan sur, 2000 ft se disc well Beeville field, td 5935 ft, set 7 inch casing to bottom, gun perforating; first perforations 5905-5914 ft, then 5859½ ft, well showed no improvement, has heavy gas pressure and flowing water, still testing. H. A. Pressey's R. T. Hicks 1, 1120-ac tr, Jose M. Uranga gr, ab 568, 4½ mi s of Normana, sd 2396 ft. G. M. Richardson et al's Mengers 1, center w 100-ac of W. R. Ryan 500-ac tr, Wm. Allen sur, near Tynan, mim and sd.

BEXAR COUNTY — American Gas Co.'s Oliver 5, 400-ac tr M. F. Rodriguez sur, Gas Ridge, td 3005 ft, underreaming. Tom Anderson's C. J. Krause 1, S. McCullough sur, dry and abnd 350 ft. Carter & Ingersoll's Louis Mann 1, 60-ac tr, John Christopher sur, 3 mi s Von Ormy, sd 968 ft, waiting on 6⅝ inch csg. Crouch & Shadrock's W. Kohler 3, 88-ac tr, J. M. Baerrera sur No. 58, skidded on rig and sp. Joe Deupree's Mrs. R. S. Nina (R. S. Coffey) 1-A Rodriquez sur, 7 mi s San Antonio, td 1200 ft, recemented at 1059 ft, bailed down, cement gave way, water broke in, testing; S. G. Winter 1, 100-ac tr in Fernando Rodriguez sur, one mi w of No. 1 Russell, dr 1105 ft. Dorine Oil Co.'s S. Tudyk 3, 330 ft sl and el of 315-ac tr, F. Cardinas sur No. 25, one mi sw of St. Hedwig, dr 371 ft, sh. H. J. Moore's Mrs. Lena Eisenhauer 1, 80-ac tr in Gertrude Rodriguez sur, 9 mi ne of San Antonio, td 692 ft in sandy shale, lowering 5 3/16 csg fr 486 ft, slight gas odor. O. M. Owensby's Minna Coreth 1, 284.04-ac tr, Adam Stafford sur No. 49, near Eckert field, sd 1091 ft, ran tubing, had slight show of oil and gas, now sd and will dr deeper into chalk. W. H. Schaeffer Co.'s P. J. Coimperlik 1, 102-ac tr, J. M. Bustillos sur, 16 mi e San Antonio, sd 834 ft, rig moved off to dr other wells, will move back again to deepen to Cooksey sand at 1405 ft; A. Mihaliski 1, 1167 ft sl, 730 ft wl of 98-ac tr, J. M. Bustillos sur (near Dorine wells) td 500 ft, set 4½ csg to td, perf last 42 ft, blew little gas and showed considerable water with little oil, abnd; A. Mihaliski 2, 1070 ft sl, 680 ft wl of 98-ac tr, J. M. Bus-

ECOLITE is Safe, Sturdy Always Ready



Ecolite 44 U.S.V. is approved by Underwriters' Laboratories and 90% of major oil companies have standardized on this safe, dependable, electric lantern. It is supreme in the oil business.

ECONOMY ELECTRIC LANTERN CO., Inc.
325 W. HURON ST., CHICAGO, ILL.

AVAILABLE AT SUPPLY STORES

ECOLITE
IT PIVOTS—TILTS—FOCUSES

tillos sur, abt 175 ft sw No. 1, dr 230 ft, shale. H. B. Schumacher's Hilda Gillette 1, 49-ac tr in M. G. de Alamiz sur No. 20, and 7 mi s of San Antonio, sd 701 ft for rotary. F. M. Shaver's A. W. Bitter 2, Jose Baerrera sur No. 58 (750 ft n of former lcn) td 517 ft, sand 476-517 ft, set 8-inch csg at 475 ft, sand shows fair gas presure.

BLANCO COUNTY—R. T. Rowe & W. E. Nixon's Polk Morrisey 3, 222-ac tr, Thomas Webb sur No. 91, 3 mi e of Blanco, dry and abnd 247 ft.

BROOKS COUNTY—The California Co.'s B. Garcia 1, tr No. 3, Las Mestinas de Gonzalina gr, Alta Mesa dist, reaming 5468 ft.

BURLESON COUNTY — Walter Blumenthal's Q. V. Crain 1, W. C. Pearce sur, ab 297, 1 mi from Milam County line, td 6328 ft, pb to 6300 ft, dr out to 6320 ft, testing with wall packer.

CALDWELL COUNTY—Pat Armstrong et al's No. 1, N. Dunlap Est., 431-ac farm in S. Seal sur, sd 21 ft. Detroit-Texas Dev. Co.'s W. P. Dunlap 3-A, S. F. Sanders sur, Dunlap area, sd 2390 ft. J. J. Elam et al's Francis-Brown-Cochran 1, W. F. Young sur, 5 mi e of Luling, sd 21 ft. Exploration Dev. Co.'s (Fred Meyer) W. R. Eiband 1, 57-ac tr, S. Seal sur, Dunlap area, dk. W. C. Jenning's McMahan 1, James Pinchback sur, se of Lockhart, td 2284 ft, setting csg 2007 ft and will acidize, show oil in Buda. W. W. Lincoln's W. Branyon 1, 154 ft nl, 150 ft el of 20-ac tr, Dillard Cooper sur, td 2065 ft, ru to pump, flowed 50 bbls day by heads, running tubing; W. Branyon 2, 150 ft wl, 420 ft nl of 20-ac tr, Dillard Cooper sur, 300 ft sw No. 1, lcn. Ogden and Reed's Mamie Barber et al 1, 65-ac lse in Squire Damon survey, and 5 mi nw Dale, pumped dry 2004 ft, ru to pump again; No. 2 Mamie Barber et al, 65-ac lse, Squire Damon sur, td 2109 ft, 6⅝ inch casg 1922 ft, dr plug, prep test. Fred G. Scott's E. P. Dunavent 1, 4 mi se San Marcos, sd 245 ft. Sterling & Wilson's M. L. Strawn 1, Pablo Martinez sur, at Lytton Springs Townsite, abnd. M. R. Tinkle et al's Arnold 1, S. Seal sur, Dunlap area, lcn.

CALHOUN COUNTY — Continental Oil Co.'s Am. Nat'l Realty Co. (Moody) 2-A (3), sec 6, blk C. P. Garcia sur, 9 mi se Seadrift, td 9083 ft, set 5¾ inch casing on bottom, recemented at 7977 ft, perforated, ran packer to bottom at 7775 ft, perf cas 6925-70 ft, sd 6925-70 ft, show 300 ft gassy mud, 30 min, no pressure, dry and abnd. Crown Central Pet. Co. et al's M. C. Driscoll 1, lot 24, Armstrong Ranch subd, Benito Moralles sur A-28, td 7010 ft, ran electric formation test, dry and abnd. Hilton & Miese's J. Brundrett 1, in Wm. Little sur, sd 192 ft. Humble O&R Co.'s P. H. Welder 2, 2640 ft nwl and nel of 1937.6-ac tr in 10,000-ac lease, J. M. Rios sur, ru.

DE WITT COUNTY — Southwestern Dev. Synd. Ltd's W. L. C. Poetter 1, 590-ac tr in Obid Marshall sur and 1520 ft w Slick No. 1 Poetter, lcn. Universal & Gillespie's Schubel 1, C. Fitzgerald sur, abt 2 mi nw Yoakum, dr 1375 ft.

DUVAL COUNTY—Cabildo Oil Co.'s (C. H. Buckley et al's) C. S. Tinney 1, sur 8, td 2146 ft, dst 1128-36 ft, rec 5 jts mud with oil odor, drlg ahead. G. E. Glasscock's Milano Land & Garden Co. 1, ne corner of sur 88, but in sur 87, 6 mi se of Gov't Wells, td 46 ft, sd for water. Frank J. Gravis et al's Gravis et al 1, sec 250, 9 mi w San Diego, dr 4520 ft. Howard Pet. Corp.'s G. Ruiz 1, sec 5, e of Loma Novia, 4000 ft test, td 3502 ft, sand 3099-3116 ft, tested 2000 ft sw, 15 min, dry & aban. Kepley Prod. Co.'s C. D. Sevier 1, sur 71, Santa Rosalia gr, dr below 2572 ft. Jameson & Byron's S. Benavides 1, 990 ft nl, 1650 ft el,, e½ sur 173, ½ mi s Cole field, ru. Magnolia Pet. Corp.'s Ira G. Yates 1, sur 556, dr 2150 ft. M. D. Masten's D. Ruiz 1, 330 ft nel and sel of n½ sur 128, ½ mi s Hoffman field, sp. Rio Bravo Oil Co.'s W. R. Peters 1, 330 ft sl and el of 160-ac lse, sec 397, J. H. Gibson sur, 2 mi e Kohler field, lcn. M. C. Hubbard 1, sur 69, one mi s of Loma Novia field, dr 1665 ft. Stanolind O&G Co.'s Ira G. Yates 3, sur 559, se of Seven Sisters field, coring 2840 ft. Texla Oil Corp.'s S. Benavides 1-C, sur 170, two miles southeast of Cole field, td 2686 ft, dry and abnd.

EDWARDS COUNTY—Peaul Teas' J. B. Stewart 1, sec 2, GC&SF sur, 14 mi se Rock Springs, td 4360 ft, dr black shale.

FAYETTE COUNTY — Ben G. Barnett's Sandy McKinnon 110-ac tr in Adam Zumwalt League, 10 mi nw of Flatonia, td 66 ft, set first surf csg, woc.

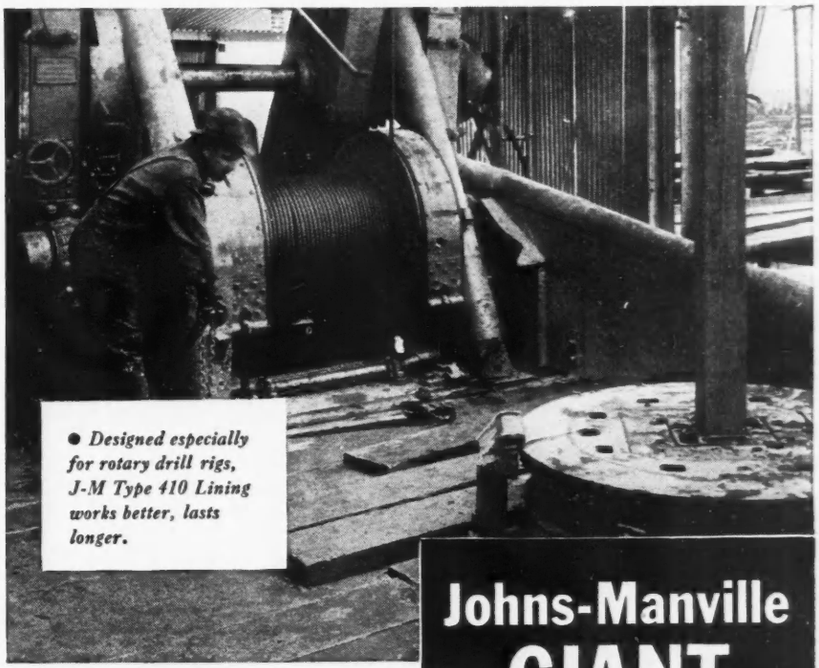
FRIO COUNTY—Amerada Pet. Corp.'s T. G. McWillams et al 1 (tr 3), Jose Arocha sur 299, top Austin chalk 5383 ft, csg 5393 ft, td 5575 ft, treated with 6000 gals acid, flowed 515 bbls in 24 hrs; T. G. McWilliams et al 1 (tr 6), Arocha sur 298, dr 5296 ft; T. G. McWilliams et al 1 (tr 17), J. M. Tijerina sur 300, top Austin chalk 5439 ft, casing 5442 ft, td 5676 ft, shot with 350 qts from 5500-5676 ft, swabbed 66 bbls 24 hrs; Halff & Oppenheimer 7, B. J. Gilman sur, td 3920 ft, set csg 3916 ft, oil sand 3916-20 ft, dr out plugs; Elgin O. Kothman, B. L. Crouch sur No. 90-9, & mi s of 3900-foot production and 1½ mi e of 5600-foot production, top Austin chalk 5244 ft, set csg 5252 ft, acidized with 2000 gals, flowed 81 bbls in 24 hrs; W. H. Smith 1, begin ne cor J. B. Mason sur, No. 322, thence s along el 4552.5 ft, thence 1550 ft w at rt angles, 4½ mi sw prod, td 6238 ft, reinstated. pb and perf 5360-5500 ft, swabbing; W. H. Smith 2, 1476-ac tr and J. V. Mason sur No. 322, w offset Mitchell, dk. Termo Co. of Texas' A. L. Arp 1, 330 ft Leona River, 330 ft sel in s cor of 102-ac tr, Blair sur, 4000-ft w of prod, Rowan & Hope contractors for 5600-ft test, moving in. T. Davis et al's Halff & Oppenheimer 1, J. D. Clare sur No. 336, 1 mi ne of Pearsall production,top chalk 5330 ft, csg 5337 ft, td 5433 ft, showing considerable oil, shot with 140 qts, bridged and cleaned out, move on standard tools.

GOLIAD COUNTY—Magnolia Pet. Co.'s S. J. Tipton 1, A. S. Thurmond sur, near common cor of Karnes-DeWitt-Goliad counties, dr 3002 ft. Port Isabel O&G Co.'s Dauderstadt 1, in Solomon Hall sur in e end of county, 5500-foot test, dr water well (closed well). Zeni Oil Co.'s (Cotton Belt) Lutenbacher 1, blk 25, Goliad Townsite sur, south of Goliad, td 5545 ft, hard cap 5530-44 ft; soft sand 5544-45 ft, blew several hrs, made considerable gas and spraying a little oil, bridged over at 3205 ft, ds stuck, trying to loosen.

GONZALES COUNTY—O. M. Owensby et al's H. B. Steen 1, N. M. Bane sur, sd 2135 ft. Tull et al's Boske 1, 61.2-ac tr, B. McClure sur, sd 1956 ft.

GUADALUPE COUNTY—Paul Armstrong's Clem Brodnaux 1, 36-ac tr, W. P. King sur, 2 mi ne Kingsbury, dr 2402 ft, hard lime. J. E. Clark's E. W. Williams 1, Green DeWitt sur, dr 1660 ft. Clark & Gay's Waldrip 1, center 1½-ac tr in Staples Townsite, G. Allen sur, td 780 ft, oil show at 744 ft, set 6⅝ csg 715 ft,top chalk 715 ft, woc. Clark & Weinert's Anderscn No. 1, Green DeWitt sur, dr 60 ft. Louis Crouch's J. Getzke 1, J. D. Clements sur, dr 2000 ft. Eickenroht & Gallagher's O. H. Jahns 1, 840-ac tr, Green DeWitt sur, 3 mi se South Darst Creek, Edwards lime test, dr 2575 ft, hard Taylor, top Taylor 2165 ft. A. C.


# That rugged J-M Giant Rotary Lining is NOW MORE RUGGED THAN EVER



● *Designed especially for rotary drill rigs, J-M Type 410 Lining works better, lasts longer.*

**Johns-Manville**
**GIANT ROTARY LINING**
**Type 410**

**IT has great resistance to wear and to heat. With a high and constant coefficient of friction, there is less lining fade, and you have better brakes, quieter brakes, with less braking effort. Smoking and dusting are reduced to a minimum. Incorporation of lead and zinc wire lessens scoring and increases brake-rim life. Truly, Type 410 Giant Rotary Lining is a giant in performance as well as name.**

**WRITE FOR NEW BROCHURE**—Contains complete recommendations on the full line of J-M Friction Materials. Write Johns-Manville, 22 East 40th Street, New York.

**William M. Barret, Inc.**
Consulting Geophysicists
*Specializing in Magnetic Surveys*
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

**AMERICAN SEISMOGRAPH COMPANY**
*Geophysical Surveys*
Houston Los Angeles
Oklahoma City

**HOARD EXPLORATION COMPANY**
Seismograph Surveys
623 Esperson Bldg.
Houston Texas

**GEOPHYSICAL REPORTS**
National Exploration Company — Seismic Surveys
Robert P. Clark Co. — Torsion Balance Surveys
SHELL BUILDING, HOUSTON, TEXAS

**NORMAN RICKER, Ph.D.**
Consulting Mathematical Physicist
MATHEMATICAL ANALYSES OF PROBLEMS in ENGINEERING AND APPLIED GEOPHYSICS
P. O. Box 1919 Phone Hadley 8510
HOUSTON, TEXAS

**DAVID DONOGHUE**
Consulting Geologist
Appraisals » Proration « Statistics
Fort Worth National Bank Building
FORT WORTH, TEXAS

**PATENTS**
Patents, Trade Marks, Copyrights and Infringement Litigation
**HARDWAY & CATHEY**
428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

**JACK A. SCHLEY**
Patent Attorney
(Established 1902)
PATENTS—INFRINGEMENTS—OPINIONS
1807-11 TOWER PETROLEUM BLDG.—DALLAS
805 2ND. NATIONAL BANK BLDG.—HOUSTON
San Antonio — Washington, D. C.

THE FORT WORTH LABORATORIES
Field Gas Testing. Analysis of oil field brines, gas, minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B.S., Ch. E., Pres.
R. H. Fash, B.S., Vice-President
828½ Monroe St., Ft. Worth, Tex.

Locke's H. Holmes 1, 26-ac tr, Cyrus Campbell sur, 2 mi n and w of Staples, dropped until resume operations; J. S. Slaughter, C. Campbell sur, sd 1050 ft, dropped until resume operations. R. C. Robbins' Mrs. J. W. Manford 1, James Hodges sur No. 374, 1250 ft e Manford Pool, sd 2581 ft. W. J. Walton et al's Antone Zoboroski's No. 6, in J. D. Clements sur, td 2168 ft, saturated chalk 2166 ft, 7 inch csg 2156 ft, comp 200 bbls day on pump.

HIDALGO COUNTY—J. T. Barlow et al's Marts F. de Chapa, Porc 39, td 2955 ft, sand 2951½-55 ft, set csg to td, perf 2851½-2955 and 2964-66 ft, making 225 bbls day, tp 500 lbs, cp 200 lbs. Mrs. Lula B. George 1, tr 13, porc 41, Reynosa Juris, 7000 ft e of discovery, 700 ft n of Samfordyce production, dr 2419 ft. Gerald O&G Co.'s Nelson Mortgage Co. 1, blk 38, lot A, La Blanco Agricultural subd, about 4 mi s of City of Donna, dr 1000 ft. Gulf States Oil Co.'s J. C. Engelman 3, lot 3, blk 70, Las Mestinas gr, 700 ft e of Mestinas field disc well, dr 3340 ft. King-Woods Oil Co.'s Osca Daskam 2, blk 30, porc 45, 10 mi ne Mission, dk and sd. Maxwell-Mundy-Morris' Southland Dev. Co. (Hidalgo County Water Control & Impr. Dist.) 1, lot 11, blk 20, Alamo Land and Sugar Co. Subd, Alamo gr, 4 mi s Alamo, td 725 ft, csg set 670 ft, will perf 652-60 ft, waiting on perforator. H. J. Porter et al's C. H. Swallow, lot 5, Porter subd, Minnesota-Texas Land & Irrigation Co. tr, s Alamo, sp and sd. Quintana Pet. Corp.'s John C. Engelman 1, e½ of lot 10, blk 94, Mestinas gr, 4 mi se of Gulf States No. 1 Engelman, coring 7470 ft. Dayle L. Smith Oil Co.'s Fairbanks & Young 1, blk 44, porc 46, Reynosa Juris, 4 mi e Samfordyce field, td 1810 ft, reamed to 1640 ft and sd. Union Sulphur Co.'s ARGL &I 7, tr No. 2309, blk 59, about 4000 fe e of Mercedes field, td 7608 ft, set 5-inch casing at 7530 ft, recompleting, swabbing gun perf 7545-49 ft; ARGL&I Co. 8, lot 2120, blk No. 87, N. Capisalla district, td 7502 ft, comp fsh job, set oil string at 7350 ft; ARGL&I Co. 9, farm tr 2268, blk 59, N. Capisalla district (abt ½ mi e of disc) dr 3100 ft. Yates McCurry's Southland Dev. Co.'s 1, 180 ft wl, 240 ft nl, lot 13, blk 24, Alamo subd, 2½ mi s of Alamo, 4000-ft contract, sp.

JIM HOGG COUNTY—French Oil Corp.'s Euginio Rodriguez 1, sh 1, partition Las Cuevitas gr, td 2748 ft, reinstated, recovered all of ds at 2722 ft, abnd; No. 2 Eugino Rodriguez, on common line of lots 18 and 19, center el and wl of sur 579, 5 mi nw of Randado, ru. S. L. Miller Oil Co.'s Yeager 2, blk 6, sur 20, sp and sd. P. H. Neilson, Trustee de la Garza 1, blk 293, Pipin subd, Randado gr, sd 610 ft.

JIM WELLS COUNTY—Houston Oil Co. et al's E. A. Hawkins et al 2, blk 11, Putnam subd, sh 3, San Diego gr, ½ mi n disc well, San Diego field, td 6301 ft, gas sand 6256-58 ft; shale with odor 6259-68 ft, sd and sh with oil odor 6242-97 ft; sand with oil odor 6297-6301 ft, pb to 5300 ft, will sdtr. O. W. Killam's George Reynolds 1, s¼ of sur 28, J. Harper, grantee, 3 mi w of Orange Grove, dr 4366 ft. Muskogee Iron Works et al's B. W. Owens 1, 660 ft s of southeast corner of Frank sur No. 152, but in Poitevent sur, (replaces Sunray 1 Owens), sp and sd to lay gas line. G. M. Richardson's J. E. Garrett 1, sec 5, N. G. Collins gr, 15 mi n of Alice, near Highway 66, td 5800 ft, re-drlg after re-bldg dk. Texon Royalty & Lucey Pet. Co.'s Coopwood & Rolsten 1, sec 17, Richard King Farm lots, 2½ mi nw Agua Dulce, coring 5697 ft. Joe E. Walsh, W. D. Wade 2, lot 2, blk "C" Bode subd, set 412 ft of 10¾ inch sur csg, woc.

KARNES COUNTY—DeGraffe & Reele's Cochran 1, 460 ft el, 160 ft sl of the McConnell League, in se cor of McConnell League, dk and mir. Worth Oil Co.'s E. Hysaw 1, 330 ft nel and sel of 1069.8-ac tr, Don Erasmus Seguin gr, lcn.

KERR COUNTY—Auld & Evans' I. R. Heffner 1, sec 13, of BS&F sur, 25 mi nw Kerrville, sd 1380 ft. Eastland Oil Co.'s Jeff Love 7, in J. Martinez sur, sec 1594, td 1850 ft, cementing cavity 1725-1800 ft. Evans & Edminston's Will Auld 1, sec 1592, 418-ac tr, sp and sd.

KIMBLE COUNTY—Dr. B. R. Thomas' Rust 1, center of sw¼ of sec 47, BS&F sur, 13 mi nw of Junction, lcn.

KLEBERG COUNTY—Clark & Anderson's J. W. Kellam 1, lot 7, sec 53, KT&I subd, 2 mi se Kingsville field, lcn abnd, replaced by McCord & Dayvault's Killam 1, 330 ft sl and el of lot 7, sec 53, KT&I subd, lcn.

LA SALLE COUNTY—Davenport & Talbot's G. Watkins, sur 103, dr 900 ft. Paul Meaders & Adair et al's Reed 1, sec 136, T. Conlan subd, 15 mi e and 10 mi s of Cotulla, sp.

LAVACA COUNTY—J. D. Aiguier et al's No. 1 A. A. Staffa, W. R. Hensey sur, 3 mi s of nl of county, sd 2340 ft. Dirks Bros.' A. Troell 1, 330 ft swl and sel of 80-ac lse in Leal sur, lcn.

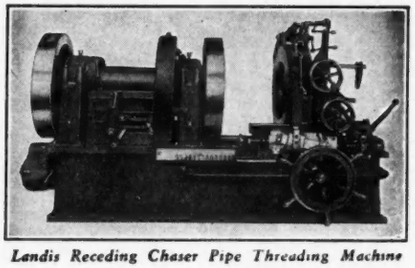
LIVE OAK COUNTY—R. H. Feltner et al's John T. Carter & Bros. 1, nw 120-ac of w 160-ac of sec 319, T&T. Ry. Co. sur in extreme sw portion of county, near Sanger Ranch, td 3460 ft, attempted dst in Lower Pettus 3457-66 ft, were coming out of hole when pipe parted fsh. Inter-Allied Pet. Corp.'s Aetna Life Ins. Co. 1, 660 ft nwl and swl of J. Poitevent sur, 49.47-ac tr, moved in part of materials. Ogden & Reed's D. C. Reed 1, Clegg Ranch, sw part of county, dr water well. T. T. Quinn's E. Terrell 1, 1000 ft sl, 2000 ft el of J. Haulihan sur, 1½ mi se of Whitsett, dr 615 ft.

MAVERICK COUNTY—Fulwood & Marr's State Bank & Trust Co. 1, GC&SF sur No. 3, 2 mi n of Eagle Pass, sd 770 ft, dropped from report until work begins. Thompson & Streeter's Joseph Wipff 1, sec 18, 7 mi w Chittim field, 10 mi n Eagle Pass, sd 220 ft.

McMULLEN COUNTY—Aransas Oil Co.'s Ruckman 2, 660 ft wl, 150 ft sl of sur 69, 13 mi sw of Wentz, sd 900 ft. John F. Camp Drlg. Co.'s No. 2 C. E. Byrne Est., 330 ft s and 3900 ft e of sw cor of 206-ac tr, in Geo. Pittuck sur, near Crowther field, td 250 ft, blew out approximately this depth making only gas. Daybault's Matula 1, 100-ac James Garner

**OIL LAND FOR LEASE**—Drilling blocks for lease, two and one half (2½) acres to four thousand (4000) acres, all good desirable locations, in southern part of Brazoria County.
Drawer Box T, Freeport, Texas

Instruments for the Oil Industry:
**GEOPHYSICS - GEOLOGY PETROLEUM ENGINEERING LABORATORY**
**Walter Ruska & Co., Inc.**
*Scientific Instruments*
929 Bankers Mortgage Bldg. — F-2515
HOUSTON, TEXAS
*Introducing*
POROMETER
PERMEAMETER
New Instruments for Testing Oil Sands
See Our Exhibit at Houston
Space 512-514

**D. S. MAIR**
**MACHINERY CORPORATION**

*Landis Receding Chaser Pipe Threading Machine*
COMPLETE LINES
Machine Tools—Metal Working Machinery—Bolt and Pipe Threading Machines
Electric Arc, Spot and Butt Welders
Hand Power and Electric Traveling Cranes—Monorail and Material Handling Equipment—Foundry Equipment
Forge Shop Equipment.
HOUSTON, TEXAS
505 Esperson Bldg. Telephone Fairfax 1466
STANLEY MAIR
DALLAS, TEXAS
10th Floor Santa Fe Bldg. Telephone 7-2874
CHARLIE HARTER

sur, 2½ mi sw Calliham, sd 1018 ft. Charles A. Hall No. 2 Claunch, 200-ac tr, M. Hely sur, ½ mi s Calliham, 400 ft se No. 1, sd 967 ft. Hill et al's Richardson 1, sur 158, dr 600 ft. Humble O&R Co.'s Rhodes 1, sec 17, six mi n and 4 mi w of se cor of county, lcn. Magnolia Pet. Co.'s Minnie Kincaid 2, sur 86, coring 2214 ft. Reliance O&R Co.'s Shiner 2, se¼ of sec 40, Shiner Ranch subd, dry and abnd 2202 ft. V. G. Schimmel's Two Rivers Ranch 3, sec 58, one mi s of Wentz, ru. Travelers Oil Co.'s Chas. T. Lark 2, 50-ac tr, E. W. B. Schrugham sur, n½ blk 114, lcn. Whisenant & Trenchard's Roos Bros. 1, 330 ft nl and el of ne¼ sec 60, 1½ mi sw Magnolia Kincaid 2, tentative lcn.

MEDINA COUNTY — Frank A. Brown's Mary Winn 1, John Ward sur, td 60 ft, set sur csg and sd. R. S. Bynum's Melton 1, 160-ac tr, sur 14½, lcn. W. C. Campbell et al (Ed Falvey et al's) McMenemey 1, sur No. 331, G. Petty sur, 4 mi se Devine, td 2892 ft, top chalk 2800 ft, pb to 2190 ft, lowering tubing, pumped a little oil, tubing clogged and well sd, considerable oil in hole. N. C. Johnson's Taylor 1, 320-ac tr, sur 136, lcn.

NUECES COUNTY—J. H. Coker & Lee Bros. Oil Co.'s A. J. Geistman 1, 60-ac tr, J. Ward sur 316, td 5000 ft, pb from 5000 ft to set csg, perf 3161-65 ft, flowed, fluid is 50 percent oil and 50 percent sw, wp 900 lbs. A. D. Corgey's Baldwin 1-A, blk 21, Russell Farm lots, Villareal sur, one mi s Saxet field, td 5006 ft, dry and abnd. J. T. Cox's John Harvey, share 11, Harvey lands, 2½ mi se Callahan, contract depth 5000 ft, sp and set surf csg. Culton & Republic Nat. Gas Co.'s 1-C Baldwin et al, blk 13, J. C. Russell Farm lots, td 7020 ft, abnd and reinstated, dk being built to workover and drill deeper. Tom Graham & Republic Nat. Gas Co.'s Whelan 1, 40-ac lse, 2550 ft ne of discovery in Villareal sur, td 5254 ft, ran electric formation test and pb to 3700 ft, sdtr, td 4032 ft, set csg, dr plug. M. F. Hurlburt's J. C. Phillip 1, center lot 9, 20-ac tr, sur 48 of Flour Bluff Encinal Garden tracts, abt 9½ mi se Corpus, sd 3983 ft. R. Johnson & W. E. Skeen's Lillyan Smith 1, 3-ac tr, Bancroft Farm lots, 1600 ft e Saxet Heights field, td 4070 ft, sand 4062-70 ft, setting csg. O. W. Killam's Louis C. Carter 1, 100-ac tr out of Wright lands in the Vicente Lopez de Herrera gr, 5 mi ne Banquette, tested sw just below 2900 ft, drlg ahead. O. W. Killam's Betty Ellich 1, 330 ft out of ne cor of 86.38-ac tr, sec 109, Pauls subd of Driscoll ranch, 4000 ft s of Clara Driscoll disc well, dk. La Jita Corp.'s Richard King Est. 2, sec 24, King Ranch subd, one mile sw of prod, coring 4825 ft in sandy shale with sticky streaks. G. M. Richardson's Wm. Gerhardt 1, 330 ft nl, 660 ft el of 208.65-ac tr, sec 79, Geo. H. Pauls subd, A. F. de La Fuente sur, abt 2½ mi ne Agua Dulce, dk. Santa Clara Oil Co.'s (Atkins & O'Neil) C. H. Cooke sec 14, Guadrilla Irrigation Co. sur, 4 mi e Driscoll, dr 4965 ft. Thompson & McGrew's A. F. Geistman 1, 120-ac tr in J. R. Ward sur 317, offset Nelson's Buckholt 1, lcn abnd. United Prod. Corp.'s M. L. Rivers 2-A, 647-ac tr in Chapman Partition, 3800 ft s No. 1-A, td 4728 ft, sand 4670-4728 ft, 7-in csg 4690, completing. R. N. Walker's G. C. Clark & Reagan 1, one mi e of Saxet Heights field, td 4065 ft, sand 4061-65 ft, dst of sand show 22 fourbles oil, 25 lbs pressure 15 min, setting csg.

REFUGIO COUNTY—Quintana Pet. Corp.'s Fannie Heard 1, Thomas Webb sur, ab 298, 3 mi e of Greta field, 1 mi n Tomoconnor, coring 5734 ft. United Prod. Corp.'s I. J. Fox 17, Wm. Hews sur, td 6259 ft, dst 6347-59 ft, rec 300 lbs. pressure 10 min, 10 ft gasoline, sandy shale gas 6251-57 ft, 5 inch csg 6248 ft, made sw and recemented.

SAN PATRICIO COUNTY — Benedum & Trees' Mrs. E. H. Welder 2, sec 19, Welder Ranch subd, 3½ mi ne Sinton, sand 5700-10 ft, set 7⅝ csg 5694 ft, dr ahead at 5850 ft; Jones 1, nw¼ sec 65, Geo. H. Pauls subd of Coleman-Fulton Pasture Co. Lands, 3 mi e Whitepoint field and 4½ mi nw Portland, coring 4959 ft in sticky sh. C. B. Bunte's W. C. Mayfield 1, tr 11, Roos subd, 2 mi n of Whitepoint field, mim. Esnes Oil Co.'s (Geo. E. Smith) J. R. Britton 3, 160-ac tr, sec 6, blks 7 and 8 second subd Taft Farm lands, lcn. Nabod Royalties, Inc.'s (Texon Drlg. Co.) R. L. Rambo 1, lot 6, sec 35, 4th addition Taft Farm lands, ½ mi e of s end of Plymouth field, dk (leases in litigation). Portilla Oil Co.'s E. H. Welder 1, sec 37, Welder Ranch subd, one mi sw of Plymouth field, dr 3670 ft in sticky shale and lime. Santa Clara Oil Co.'s (Atkins & O'Neil) J. F. Welder heirs, 1250-ac lse, P. Villareal sur, 1½ mi sw of disc well, td 6004 ft, dry and abnd. Shell Pet. Corp.'s G. W. Pullin 1, sec 1, second addition Taft Farm lands, td 3985 ft, dst 3965-85 ft, rec 3500 ft plo 25 lbs, pressure, 15 min, top sand 3978 ft, drlg ahead to test Greta sand. Willis Storm's Nancy Hobbs 1-A, 50-ac tr, M. P. J. & N. Delgado sur, coring 5700 ft.

STARR COUNTY—C. G. Borah et al's V. G. de Guerra 1-A, sh 92, porc 68, 2 mi n of Roma, abnd 897 ft. John H. Clopton et al's Kelsey-Bass 3, sur 357, abnd 700 ft. Coreta Pet. Co.'s J. H. Burnett (Haden et al) 1, sh 47, porc 80, dr 2234 ft. H. H. Currie's Y. G. Garcia 1, sh 7-B, porc 71, dr 150 ft. Griffin & Kimbrough's Guerra 1, sh 298, porc 69, n of Mier, lcn. King-Wood Oil Co.'s Guerra 1, 330 ft sel, 430 ft nel of blk 35, J. M. Crawford subd, porc 56, ru. Otto W. Woods' H. P. Guerra 1, lot 35, Conroe subd, porc 55, Mier Juris, spud in and shut down.

TRAVIS COUNTY—Albrecht & Brinkrueger, Sr.'s M. C. Swenson 1, 75-ac tr, L. Kimbro League, sec 5, sd 1270 ft. Arts & Co.'s Wolff 1, Thomas Hancock sur No. 20, ½ mi n New Sweden, sd 1280 ft. W. F. Johnson's Elijah Beery 1, center lot 1, lot 14, Granview subd, division B, city of Austin, lcn.

VICTORIA COUNTY—Rowan & Hope's A. W. Scheel 1, Scheel 195-ac tr in J. E. Escalera grant, dr 3077 ft.

WEBB COUNTY—Foster Barnsley's G. H. Webster 5, ne¼ of nw ¼ sur 684, td 3047 ft, sand 3032-47 ft, set 750 ft of 4½ inch csg, last 18 ft perforated, sd. Mills Bennett's L. Moglia 1, sur 709, coring 2496 ft. O. W. Killam's A. M. Bruni 7, tr B-7, El Ranchito 6723.5-ac tr, J. V. Borrego gr, dry sand 1106-1112 ft, dry and abnd 1266 ft. Luling O&G Co.'s Peal 1, nw¼ of se¼ of sur 72, one-half mi n Lopez field, td 2330 ft, sand 2077-90 ft, show gas, ran electric formation test, pb and set csg thru sand, will gun perf. Payne & Martinez's Mrs. M. P. Perry 1, sur 771, lcn. S. S. & B. Oil Co.'s Lone Star Construction Co. 9 (now Lutez Oil Co.) proc 12, ½ mi nw of Laredo, sd 2004 ft. Smith & Hamill's A. M. Bruni 1, sur 2213, td 3043 ft, testing, showed 330 ft mud and oil with blow of gas on 20 min dst. W. H. Vernor, Tr.'s Jefferies Ranch 1, blk 13, sec 1454, 30 mi nw Laredo, dr 1390 ft.

WILLACY COUNTY — Shell Pet. Co.'s Yturria 1, most southerly se cor of sh 64, td 2500 ft, drlg ahead after installing new boiler.

WILLIAMSON COUNTY—Glass Bros.' A. Albert 1, P. Coursey sur, sd 785 ft. H. F. Goff's Charles Patschke 1, 100-ac tr in Foley sur, 2 mi se of Thorndale, td 1135 ft, sand 1130-55 ft; set csg, woc. James H. Holdeman et al's Amor Forwood 1, 160-ac tr in HT&B Ry. sur, sec 4, sur 14, drilling 960 ft in shale.

WILSON COUNTY—Comet Oil Co.'s Jim McDaniel 1, 343-ac tr in Conception Botello sur, 4 mi Poth, sp and sd. Otto Hierholzer's E. M. Hierholzer 1, R. Salinas sur, lcn. A. G. Reimenschneider's Lon Harrell 2, 209-ac tr in Manueal Baerrera sur, 5 mi s of Floresville, dr 270 ft in hard rock.

ZAPATA COUNTY — Dan Auld & Oklahoma Co. of Texas' J. M. Sanchez 1, blk 37, sur 9, Borrego grant, north end of county, sp. Ivan Howard et al's Y. Martinez 1, blk 1, sur 206, sd. 1250 ft; Y. Martinez 2, sur 241, clearing lcn. O. J. Perren's Uribe 1, blk 31, Perren subd, sh 475, San Ygnacio subd, Borrego gr, dk.

ZAVALLA COUNTY — Bay Oil Corp.'s Nat'l Bank of Commerce 1, sec 43, blk "A" in AB&M sur, dr 100 ft. W. L. Bridges' E. B. Flowers 1, sec 19, blk 1, I&GN RR. sur, dr 400 ft. Frank Buttram et al's Whitecotton 1, B&M sur, No. 1, dr 2860 ft. Leona Oil Corp.'s George West 1, C. Bustillo sur No. 1, dr 4185 ft.

## WYOMING

CARBON COUNTY — General Petroleum Corporation's Union Pacific 1, sw sw nw 5-19n-83w, spd.

SHERIDAN COUNTY — Sheridan Syndicates' A. Allison 1, sw sw se, 15-55n-85w, resumed operations at 3050 ft.

WESTON COUNTY—Conway Oil Co. Government 1, se se nw 7-41n-60w, dr 2118 ft after dr by lost tools at 2097 ft.


SOUTH TEXAS GEOPHYSICAL CORP.

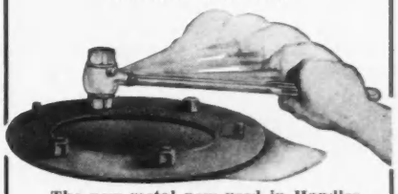
Seismograph Exploration

Phones
Fairfax 3391 • Long Distance 49

20TH FLOOR STERLING BUILDING HOUSTON, TEXAS



SPEED UP NUT TURNING
WITH THE
FAVORITE REVERSIBLE RATCHET WRENCH
*Works on a Quick Straight-Ahead Ratchet Movement*



The new metal now used in Handles, Heads and Pawls enables the "Favorite" to stand up under harder and rougher usage.
Ratchet movement eliminates all lost motion. Does not leave the nut until operation is completed.

A TIME-SAVER
Can be used in narrower places than an ordinary wrench.
Each head can turn two different-sized nuts —one in each end.
Opening in head allows bolt to pass clear through.

*SEND FOR FULL PARTICULARS*

GREENE, TWEED & CO.
Sole Manufacturers
109 DUANE ST. NEW YORK, N. Y.



*Opposite* the Subway Terminal
LOS ANGELES

The Most convenient
The Best accommodations
The Finest meals

from $2.50 PER DAY

Grill
Tavern
Coffee
Shop

Easy chairs, sleep-inspiring beds, large rooms with luxurious fittings
Unsurpassed service and luxury are yours at amazingly low cost

New HOTEL CLARK
P.G.B. MORRISS *Mgr.*

**William M. Barret, Inc.**
Consulting Geophysicists
*Specializing in Magnetic Surveys*
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

**AMERICAN SEISMOGRAPH COMPANY**
*Geophysical Surveys*
Houston Los Angeles
Oklahoma City

**HOARD EXPLORATION COMPANY**
Seismograph Surveys
623 Esperson Bldg.
Houston Texas

**GEOPHYSICAL REPORTS**
National Exploration Company — Seismic Surveys
Robert P. Clark Co. — Torsion Balance Surveys
SHELL BUILDING, HOUSTON, TEXAS

**NORMAN RICKER, Ph.D.**
Consulting Mathematical Physicist
MATHEMATICAL ANALYSES OF PROBLEMS in ENGINEERING AND APPLIED GEOPHYSICS
P. O. Box 1919 Phone Hadley 8510
HOUSTON, TEXAS

**DAVID DONOGHUE**
Consulting Geologist
Appraisals » Proration « Statistics
Fort Worth National Bank Building
FORT WORTH, TEXAS

**PATENTS**
Patents, Trade Marks, Copyrights and Infringement Litigation
**HARDWAY & CATHEY**
428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

**JACK A. SCHLEY**
Patent Attorney
(Established 1902)
PATENTS—INFRINGEMENTS—OPINIONS
1807-11 TOWER PETROLEUM BLDG.—DALLAS
805 2ND. NATIONAL BANK BLDG.—HOUSTON
San Antonio — Washington, D. C.

THE FORT WORTH LABORATORIES
Field Gas Testing. Analysis of oil field brines, gas, minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B.S., Ch. E., Pres.
R. H. Fash, B.S., Vice-President
828½ Monroe St., Ft. Worth, Tex.

Locke's H. Holmes 1, 26-ac tr, Cyrus Campbell sur, 2 mi n and w of Staples, dropped until resume operations; J. S. Slaughter, C. Campbell sur, sd 1050 ft, dropped until resume operations. R. C. Robbins' Mrs. J. W. Manford 1, James Hodges sur No. 374, 1250 ft e Manford Pool, sd 2581 ft. W. J. Walton et al's Antone Zoboroski's No. 6, in J. D. Clements sur, td 2168 ft, saturated chalk 2166 ft, 7 inch csg 2156 ft, comp 200 bbls day on pump.

HIDALGO COUNTY—J. T. Barlow et al's Marts F. de Chapa, Porc 39, td 2955 ft, sand 2951½-55 ft, set csg to td, perf 2851½-2955 and 2964-66 ft, making 225 bbls day, tp 500 lbs, cp 200 lbs. Mrs. Lula B. George 1, tr 13, porc 41, Reynosa Juris, 7000 ft e of discovery, 700 ft n of Samfordyce production, dr 2419 ft. Gerald O&G Co.'s Nelson Mortgage Co. 1, blk 38, lot A, La Blanco Agricultural subd, about 4 mi s of City of Donna, dr 1000 ft. Gulf States Oil Co.'s J. C. Engelman 3, lot 3, blk 70, Las Mestinas gr, 700 ft e of Mestinas field disc well, dr 3340 ft. King-Woods Oil Co.'s Osca Daskam 2, blk 30, porc 45, 10 mi ne Mission, dk and sd. Maxwell-Mundy-Morris' Southland Dev. Co. (Hidalgo County Water Control & Impr. Dist.) 1, lot 11, blk 20, Alamo Land and Sugar Co. Subd, Alamo gr, 4 mi s Alamo, td 725 ft, csg set 670 ft, will perf 652-60 ft, waiting on perforator. H. J. Porter et al's C. H. Swallow, lot 5, Porter subd, Minnesota-Texas Land & Irrigation Co. tr, s Alamo, sp and sd. Quintana Pet. Corp.'s John C. Engelman 1, e½ of lot 10, blk 94, Mestinas gr, 4 mi se of Gulf States No. 1 Engelman, coring 7470 ft. Dayle L. Smith Oil Co.'s Fairbanks & Young 1, blk 44, porc 46, Reynosa Juris, 4 mi e Samfordyce field, td 1810 ft, reamed to 1640 ft and sd. Union Sulphur Co.'s ARGL &I 7, tr No. 2309, blk 59, about 4000 fe e of Mercedes field, td 7608 ft, set 5-inch casing at 7530 ft, recompleting, swabbing gun perf 7545-49 ft; ARGL&I Co. 8, lot 2120, blk No. 87, N. Capisalla district, td 7502 ft, comp fsh job, set oil string at 7350 ft; ARGL&I Co. 9, farm tr 2268, blk 59, N. Capisalla district (abt ½ mi e of disc) dr 3190 ft. Yates McCurry's Southland Dev. Co.'s 1, 180 ft wl, 240 ft nl, lot 13, blk 24, Alamo subd, 2½ mi s of Alamo, 4000-ft contract, sp.

JIM HOGG COUNTY—French Oil Corp.'s Euginio Rodriguez 1, sh 1, partition Las Cuevitas gr, td 2748 ft, reinstated, recovered all of ds at 2722 ft, abnd; No. 2 Eugino Rodriguez, on common line of lots 18 and 19, center el and wl of sur 579, 5 mi nw of Randado, ru. S. L. Miller Oil Co.'s Yeager 2, blk 6, sur 20, sp and sd. P. H. Neilson, Trustee de la Garza 1, blk 293, Pipin subd, Randado gr, sd 610 ft.

JIM WELLS COUNTY—Houston Oil Co. et al's E. A. Hawkins et al 2, blk 11, Putnam subd, sh 3, San Diego gr, ½ mi n disc well, San Diego field, td 6301 ft, gas sand 6256-58 ft; shale with odor 6259-68 ft, sd and sh with oil odor 6242-97 ft; sand with oil odor 6297-6301 ft, pb to 5300 ft, will sdtr. O. W. Killam's George Reynolds 1, s½ of sur 28, J. Harper, grantee, 3 mi w of Orange Grove, dr 4366 ft. Muskogee Iron Works et al's B. W. Owens 1, 660 ft s of southeast corner of Frank sur No. 152, but in Poitevent sur, (replaces Sunray 1 Owens), sp and sd to lay gas line. G. M. Richardson's J. E. Garrett 1, sec 5, N. G. Collins gr, 15 mi n of Alice, near Highway 66, td 5800 ft, re-drlg after re-bldg dk. Texon Royalty & Lucey Pet. Co.'s Coopwood & Rolsten 1, sec 17, Richard King Farm lots, 2½ mi nw Agua Dulce, coring 5697 ft. Joe E. Walsh, W. D. Wade 2, lot 2, blk "C" Bode subd, set 412 ft of 10¾ inch sur csg, woc.

KARNES COUNTY—DeGraffe & Reele's Cochran 1, 460 ft el, 160 ft sl of the McConnell League, in se cor of McConnell League, dk and mir. Worth Oil Co.'s E. Hysaw 1, 330 ft nel and sel of 1069.8-ac tr, Don Erasmus Seguin gr, lcn.

KERR COUNTY—Auld & Evans' I. R. Heffner 1, sec 13, of BS&F sur, 25 mi nw Kerrville, sd 1380 ft. Eastland Oil Co.'s Jeff Love 7, in J. Martinez sur, sec 1594, td 1850 ft, cementing cavity 1725-1800 ft. Evans & Edminston's Will Auld 1, sec 1592, 418-ac tr, sp and sd.

KIMBLE COUNTY—Dr. B. R. Thomas' Rust 1, center of sw¼ of sec 47, BS&F sur, 13 mi nw of Junction, lcn.

KLEBERG COUNTY—Clark & Anderson's J. W. Kellam 1, lot 7, sec 53, KT&I subd, 2 mi se Kingsville field, lcn abnd, replaced by McCord & Dayvault's Killam 1, 330 ft sl and el of lot 7, sec 53, KT&I subd, lcn.

LA SALLE COUNTY—Davenport & Talbot's G. Watkins, sur 103, dr 900 ft. Paul Meaders & Adair et al's Reed 1, sec 136, T. Conlan subd, 15 mi e and 10 mi s of Cotulla, sp.

LAVACA COUNTY—J. D. Aiguier et al's No. 1 A. A. Staffa, W. R. Hensey sur, 3 mi s of nl of county, sd 2340 ft. Dirks Bros.' A. Troell 1, 330 ft swl and sel of 80-ac lse in Leal sur, lcn.

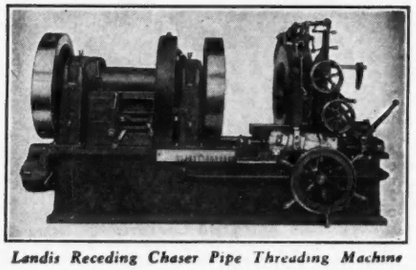
LIVE OAK COUNTY—R. H. Feltner et al's John T. Carter & Bros. 1, nw 120-ac of w 160-ac of sec 319, T&T. Ry. Co. sur in extreme sw portion of county, near Sanger Ranch, td 3460 ft, attempted dst in Lower Pettus 3457-66 ft, were coming out of hole when pipe parted fsh. Inter-Allied Pet. Corp.'s Aetna Life Ins. Co. 1, 660 ft nwl and swl of J. Poitevent sur, 49.47-ac tr, moved in part of materials. Ogden & Reed's D. C. Reed 1, Clegg Ranch, sw part of county, dr water well. T. T. Quinn's E. Terrell 1, 1000 ft sl, 2000 ft el of J. Haulihan sur, 1½ mi se of Whitsett, dr 615 ft.

MAVERICK COUNTY—Fulwood & Marr's State Bank & Trust Co. 1, GC&SF sur No. 3, 2 mi n of Eagle Pass, sd 770 ft, dropped from report until work begins. Thompson & Streeter's Joseph Wipff 1, sec 18, 7 mi w Chittim field, 10 mi n Eagle Pass, sd 220 ft.

McMULLEN COUNTY—Aransas Oil Co.'s Ruckman 2, 660 ft wl, 150 ft sl of sur 69, 13 mi sw of Wentz, sd 900 ft. John F. Camp Drlg. Co.'s No. 2 C. E. Byrne Est., 330 ft s and 3900 ft e of sw cor of 206-ac tr, in Geo. Pittuck sur, near Crowther field, td 250 ft, blew out approximately this depth making only gas. Daybault's Matula 1, 100-ac James Garner

**OIL LAND FOR LEASE**—Drilling blocks for lease, two and one half (2½) acres to four thousand (4000) acres, all good desirable locations, in southern part of Brazoria County.
Drawer Box T, Freeport, Texas

Instruments for the Oil Industry:
GEOPHYSICS - GEOLOGY
PETROLEUM ENGINEERING
LABORATORY
**Walter Ruska & Co., Inc.**
*Scientific Instruments*
929 Bankers Mortgage Bldg. — F-2515
HOUSTON, TEXAS
*Introducing*
POROMETER
PERMEAMETER
New Instruments for Testing Oil Sands
See Our Exhibit at Houston
Space 512-514

**D. S. MAIR**
**MACHINERY CORPORATION**

*Landis Receding Chaser Pipe Threading Machine*
COMPLETE LINES
Machine Tools—Metal Working Machinery—Bolt and Pipe Threading Machines
Electric Arc, Spot and Butt Welders
Hand Power and Electric Traveling Cranes—Monorail and Material Handling Equipment—Foundry Equipment
Forge Shop Equipment.
HOUSTON, TEXAS
505 Esperson Bldg. Telephone Fairfax 1466
STANLEY MAIR
DALLAS, TEXAS
10th Floor Santa Fe Bldg. Telephone 7-2874
CHARLIE HARTER

sur, 2½ mi sw Calliham, sd 1018 ft. Charles A. Hall No. 2 Claunch, 200-ac tr, M. Hely sur, ½ mi s Calliham, 400 ft se No. 1, sd 967 ft. Hill et al's Richardson 1, sur 158, dr 600 ft. Humble O&R Co.'s Rhodes 1, sec 17, six mi n and 4 mi w of se cor of county, lcn. Magnolia Pet. Co.'s Minnie Kincaid 2, sur 86, coring 2214 ft. Reliance O&R Co.'s Shiner 2, se¼ of sec 40, Shiner Ranch subd, dry and abnd 2202 ft. V. G. Schimmel's Two Rivers Ranch 3, sec 58, one mi s of Wentz, ru. Travelers Oil Co.'s Chas. T. Lark 2, 50-ac tr, E. W. B. Schrugham sur, n½ blk 114, lcn. Whisenant & Trenchard's Roos Bros. 1, 330 ft nl and el of ne¼ sec 60, 1½ mi sw Magnolia Kincaid 2, tentative lcn.

MEDINA COUNTY — Frank A. Brown's Mary Winn 1, John Ward sur, td 60 ft, set sur csg and sd. R. S. Bynum's Melton 1, 160-ac tr, sur 14½, lcn. W. C. Campbell et al (Ed Falvey et al's) McMenemey 1, sur No. 331, G. Petty sur, 4 mi se Devine, td 2892 ft, top chalk 2800 ft, pb to 2190 ft, lowering tubing, pumped a little oil, tubing clogged and well sd, considerable oil in hole. N. C. Johnson's Taylor 1, 320-ac tr, sur 136, lcn.

NUECES COUNTY—J. H. Coker & Lee Bros. Oil Co.'s A. J. Geistman 1, 60-ac tr, J. Ward sur 316, td 5000 ft, pb from 5000 ft to set csg, perf 3161-65 ft, flowed, fluid is 50 percent oil and 50 percent sw, wp 900 lbs. A. D. Corgey's Baldwin 1-A, blk 21, Russell Farm lots, Villareal sur, one mi s Saxet field, td 5006 ft, dry and abnd. J. T. Cox's John Harvey, share 11, Harvey lands, 2½ mi se Callahan, contract depth 5000 ft, sp and set surf csg. Culton & Republic Nat. Gas Co.'s 1-C Baldwin et al, blk 13, J. C. Russell Farm lots, td 7020 ft, abnd and reinstated, dk being built to workover and drill deeper. Tom Graham & Republic Nat. Gas Co.'s Whelan 1, 40-ac lse, 2550 ft ne of discovery in Villareal sur, td 5254 ft, ran electric formation test and pb to 3700 ft, sdtr, td 4032 ft, set csg, dr plug. M. F. Hurlburt's J. C. Phillip 1, center lot 9, 20-ac tr, sur 48 of Flour Bluff Encinal Garden tracts, abt 9¼ mi se Corpus, sd 3983 ft. R. Johnson & W. E. Skeen's Lillyan Smith 1, 3-ac tr, Bancroft Farm lots, 1600 ft e Saxet Heights field, td 4070 ft, sand 4062-70 ft, setting csg. O. W. Killam's Louis C. Carter 1, 100-ac tr out of Wright lands in the Vicente Lopez de Herrera gr, 5 mi ne Banquette, tested sw just below 2900 ft, drlg ahead. O. W. Killam's Betty Ellich 1, 330 ft out of ne cor of 86.38-ac tr, sec 109, Pauls subd of Driscoll ranch, 4000 ft s of Clara Driscoll disc well, dk. La Jita Corp.'s Richard King Est. 2, sec 24, King Ranch subd, one mile sw of prod, coring 4825 ft in sandy shale with sticky streaks. G. M. Richardson's Wm. Gerhardt 1, 330 ft nl, 660 ft el of 208.65-ac tr, sec 79, Geo. H. Pauls subd, A. F. de La Fuente sur, abt 2½ mi ne Agua Dulce, dk. Santa Clara Oil Co.'s (Atkins & O'Neil) C. H. Cooke sec 14, Guadrilla Irrigation Co. sur, 4 mi e Driscoll, dr 4965 ft. Thompson & McGrew's A. F. Geistman 1, 120-ac tr in J. R. Ward sur 317, offset Nelson's Buckholt 1, lcn abnd. United Prod. Corp.'s M. L. Rivers 2-A, 647-ac tr in Chapman Partition, 3800 ft s No. 1-A, td 4728 ft, sand 4670-4728 ft, 7-in csg 4690, completing. R. N. Walker's G. C. Clark & Reagan 1, one mi e of Saxet Heights field, td 4065 ft, sand 4061-65 ft, dst of sand show 22 fourbles oil, 25 lbs pressure 15 min, setting csg.

REFUGIO COUNTY—Quintana Pet. Corp.'s Fannie Heard 1, Thomas Webb sur, ab 298, 3 mi e of Greta field, 1 mi n Tomoconnor, coring 5734 ft. United Prod. Corp.'s I. J. Fox 17, Wm. Hews sur, td 6259 ft, dst 6347-59 ft, rec 300 lbs. pressure 10 min, 10 ft gasoline, sandy shale gas 6251-57 ft, 5 inch csg 6248 ft, made sw and recemented.

SAN PATRICIO COUNTY — Benedum & Trees' Mrs. E. H. Welder 2, sec 19, Welder Ranch subd, 3½ mi ne Sinton, sand 5700-10 ft, set 7⅝ csg 5694 ft, dr ahead at 5850 ft; Jones 1, nw¼ sec 65, Geo. H. Pauls subd of Coleman-Fulton Pasture Co. Lands, 3 mi e Whitepoint field and 4½ mi nw Portland, coring 4959 ft in sticky sh. C. B. Bunte's W. C. Mayfield 1, tr 11, Roos subd, 2 mi n of Whitepoint field, mim. Esnes Oil Co.'s (Geo. E. Smith) J. R. Britton 3, 160-ac tr, sec 6, blks 7 and 8 second subd Taft Farm lands, lcn. Nabod Royalties, Inc.'s (Texon Drlg. Co.) R. L. Rambo 1, lot 6, sec 35, 4th addition Taft Farm lands, ½ mi e of s end of Plymouth field, dk (leases in litigation). Portilla Oil Co.'s E. H. Welder 1, sec 37, Welder Ranch subd, one mi sw of Plymouth field, dr 3670 ft in sticky shale and lime. Santa Clara Oil Co.'s (Atkins & O'Neil) J. F. Welder heirs, 1250-ac lse, P. Villareal sur, 1½ mi sw of disc well, td 6004 ft, dry and abnd. Shell Pet. Corp.'s G. W. Pullin 1, sec 1, second addition Taft Farm lands, td 3985 ft, dst 3965-85 ft, rec 3500 ft plo 25 lbs, pressure, 15 min, top sand 3978 ft, drlg ahead to test Greta sand. Willis Storm's Nancy Hobbs 1-A, 50-ac tr, M. P. J. & N. Delgado sur, coring 5700 ft.

STARR COUNTY—C. G. Borah et al's V. G. de Guerra 1-A, sh 92, porc 68, 2 mi n of Roma, abnd 897 ft. John H. Clopton et al's Kelsey-Bass 3, sur 357, abnd 700 ft. Coreta Pet. Co.'s J. H. Burnett (Haden et al) 1, sh 47, porc 80, dr 2234 ft. H. H. Currie's Y. G. Garcia 1, sh 7-B, porc 71, dr 150 ft. Griffin & Kimbrough's Guerra 1, sh 298, porc 69, n of Mier, lcn. King-Wood Oil Co.'s Guerra 1, 330 ft sel, 430 ft nel of blk 35, J. M. Crawford subd, porc 56, ru. Otto W. Woods' H. P. Guerra 1, lot 35, Conroe subd, porc 55, Mier Juris, spud in and shut down.

TRAVIS COUNTY—Albrecht & Brinkrueger, Sr.'s M. C. Swenson 1, 75-ac tr, L. Kimbro League, sec 5, sd 1270 ft. Arts & Co.'s Wolff 1, Thomas Hancock sur No. 20, ½ mi n New Sweden, sd 1280 ft. W. F. Johnson's Elijah Beery 1, center lot 1, lot 14, Granview subd, division B, city of Austin, lcn.

VICTORIA COUNTY—Rowan & Hope's A. W. Scheel 1, Scheel 195-ac tr in J. E. Escalera grant, dr 3077 ft.

WEBB COUNTY—Foster Barnsley's G. H. Webster 5, ne¼ of nw ¼ sur 684, td 3047 ft, sand 3032-47 ft, set 750 ft of 4½ inch csg, last 18 ft perforated, sd. Mills Bennett's L. Moglia 1, sur 709, coring 2496 ft. O. W. Killam's A. M. Bruni 7, tr B-7, El Ranchito 6723.5-ac tr, J. V. Borrego gr, dry sand 1106-1112 ft, dry and abnd 1266 ft. Luling O&G Co.'s Peal 1, nw¼ of se¼ of sur 72, one-half mi n Lopez field, td 2330 ft, sand 2077-90 ft, show gas, ran electric formation test, pb and set csg thru sand, will gun perf. Payne & Martinez's Mrs. M. P. Perry 1, sur 771, lcn. S. S. & B. Oil Co.'s Lone Star Construction Co. 9 (now Lutez Oil Co.) proc 12, ½ mi nw of Laredo, sd 2004 ft. Smith & Hamill's A. M. Bruni 1, sur 2213, td 3043 ft, testing, showed 330 ft mud and oil with blow of gas on 20 min dst. W. H. Vernor, Tr.'s Jefferies Ranch 1, blk 13, sec 1454, 30 mi nw Laredo, dr 1390 ft.

WILLACY COUNTY — Shell Pet. Co.'s Yturria 1, most southerly se cor of sh 64, td 2500 ft, drlg ahead after installing new boiler.

WILLIAMSON COUNTY—Glass Bros.' A. Albert 1, P. Coursey sur, sd 785 ft. H. F. Goff's Charles Patschke 1, 100-ac tr in Foley sur, 2 mi se of Thorndale, td 1135 ft, sand 1130-55 ft; set csg, woc. James H. Holdeman et al's Amor Forwood 1, 160-ac tr in HT&B Ry. sur, sec 4, sur 14, drilling 960 ft in shale.

WILSON COUNTY—Comet Oil Co.'s Jim McDaniel 1, 343-ac tr in Conception Botello sur, 4 mi Poth, sp and sd. Otto Hierholzer's E. M. Hierholzer 1, R. Salinas sur, lcn. A. G. Reimenschneider's Lon Harrell 2, 209-ac tr in Manueal Baerrera sur, 5 mi s of Floresville, dr 270 ft in hard rock.

ZAPATA COUNTY — Dan Auld & Oklahoma Co. of Texas' J. M. Sanchez 1, blk 37, sur 9, Borrego grant, north end of county, sp. Ivan Howard et al's Y. Martinez 1, blk 1, sur 206, sd. 1250 ft; Y. Martinez 2, sur 241, clearing lcn. O. J. Perren's Uribe 1, blk 31, Perren subd, sh 475, San Ygnacio subd, Borrego gr, dk.

ZAVALLA COUNTY — Bay Oil Corp.'s Nat'l Bank of Commerce 1, sec 43, blk "A" in AB&M sur, dr 100 ft. W. L. Bridges' E. B. Flowers 1, sec 19, blk 1, I&GN RR. sur, dr 400 ft. Frank Buttram et al's Whitecotton 1, B&M sur, No. 1, dr 2860 ft. Leona Oil Corp.'s George West 1, C. Bustillo sur No. 1, dr 4185 ft.

## WYOMING

CARBON COUNTY — General Petroleum Corporation's Union Pacific 1, sw sw nw 5-19n-83w, spd.

SHERIDAN COUNTY — Sheridan Syndicates' A. Allison 1, sw sw se, 15-55n-85w, resumed operations at 3050 ft.

WESTON COUNTY—Conway Oil Co. Government 1, se se nw 7-41n-60w, dr 2118 ft after dr by lost tools at 2097 ft.


SOUTH TEXAS GEOPHYSICAL CORP.

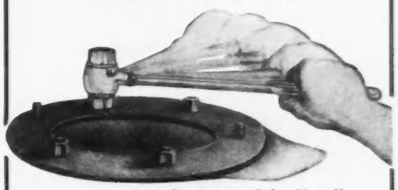
Seismograph Exploration

Phones:
Fairfax 3321 • Long Distance 49

20TH FLOOR STERLING BUILDING HOUSTON, TEXAS



SPEED UP NUT TURNING
WITH THE
FAVORITE REVERSIBLE RATCHET WRENCH
*Works on a Quick Straight-Ahead Ratchet Movement*



The new metal now used in Handles, Heads and Pawls enables the "Favorite" to stand up under harder and rougher usage.
Ratchet movement eliminates all lost motion. Does not leave the nut until operation is completed.

A TIME-SAVER
Can be used in narrower places than an ordinary wrench.
Each head can turn two different-sized nuts —one in each end.
Opening in head allows bolt to pass clear through.

*SEND FOR FULL PARTICULARS*

GREENE, TWEED & CO.
Sole Manufacturers
109 DUANE ST. NEW YORK, N. Y.



*Opposite* the Subway Terminal
LOS ANGELES

The Most convenient
The Best accommodations
The Finest meals

from $2.50 PER DAY

Grill
Tavern
Coffee
Shop

Easy chairs, sleep-inspiring beds, large rooms with luxurious fittings

Unsurpassed service and luxury are yours at amazingly low cost

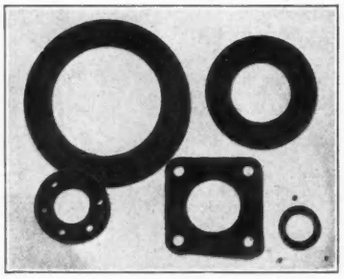
New HOTEL CLARK
P.G.B. MORRISS *Mgr.*

# GARLOCK 22
## RED RUBBER SHEET

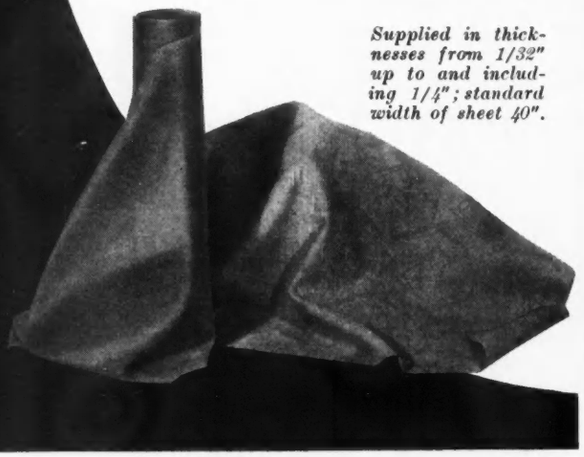
## DEPENDABLE ...ECONOMICAL!

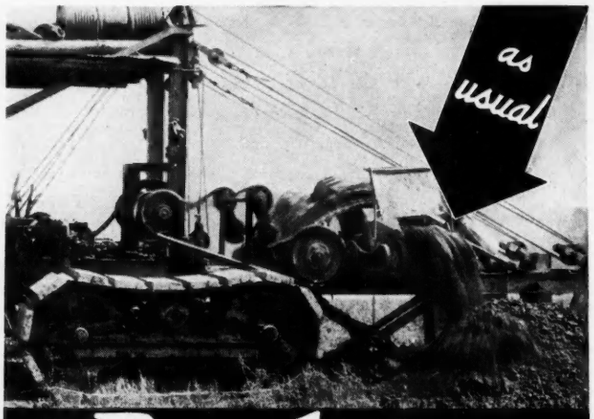
GARLOCK 22 is a general purpose Red Rubber Sheet that gives superior service on any job for which a high quality rubber gasketing material is required. It is particularly recommended for use on hot or cold water and saturated steam joints at pressures up to 150 lbs. per square inch. The illustration below shows a few GARLOCK 122 gaskets cut from GARLOCK 22 Sheet Packing. Can be supplied in any size, shape and quantity.

THE GARLOCK PACKING COMPANY
PALMYRA, N. Y.
Tulsa, Oklahoma Houston, Texas
Los Angeles, California



*Supplied in thicknesses from 1/32" up to and including 1/4"; standard width of sheet 40".*






# Buckeye
## DIGS THE DITCH

Buckeye digging wheels are turning - pipe-line ditch moves steadily forward, through soft soil and rocky ground. This "usual" thing is happening wherever pipe-lines are being laid. Always abreast of the times, ready with a ditcher to do any job at the lowest year around cost. That is and has been the "usual" service of Buckeye to the Oil Industry for more than thirty-five years.

BID THE Buckeye WAY
ask for our operation data before you bid

THE
BUCKEYE TRACTION DITCHER CO.,
FINDLAY, O.

WE INVITE YOU TO OUR BOOTH NO. 3, PENNSYLVANIA AVENUE, DURING THE TULSA PETROLEUM EXPOSITION

## "IT MINIMIZES THE HUMAN ELEMENT"

**That's what a certain Chief Engineer of a large eastern power plant likes about Sand-Banum. Its simplicity of application and infallibility of performance reduces the human element to a minimum in the control of scale and corrosion.**

SAND BANUM

***"The Entirely Different Boiler and Engine Treatment"***

. . . is the SIMPLEST method available: a FEW OUNCES in boiler or engine each MONTH, that's all! And it is ABSOLUTELY HARMLESS to equipment; cannot damage clothing or injure skin, eyes or any part of the body.

It is also the MOST EFFICIENT because its mechanical-colloidal action makes it IMPOSSIBLE for scale or corrosion to form!

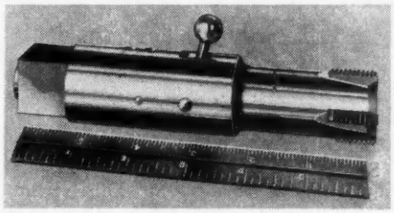
**Sand-Banum Colloids succeed where "chemical compounds" fail. May we PROVE its superiority and profitable economy in your plant — on our guarantee?**

**AMERICAN SAND-BANUM COMPANY, Inc.**
**342 Madison Avenue New York City**
*Stocks carried by*
**WESTERN SAND-BANUM COMPANY**
**Houston, Texas Denver, Colorado Fresno, California**
***and at other convenient points.***

# NEW PRODUCTS FOR THE FIELD
## Machinery • Tools • Catalogs • Books

### HAND TAP
**Landis Machine Company**

Landis Machine Company, Waynesboro, Pennsylvania, has announced an improved hand sizing tap of the collapsible type. This tap, designed primarily as a hand sizing tap to take the place of the solid adjustable tap ordinarily used, offers the advantage of instant withdrawal from the work without requiring to be backed out. It also eliminates the tearing of the threads frequently caused by backing out a solid tap as well as undue wear of the chasers by having the radial clearance worn off in the backing out operation.



**Landis Hand Tap**

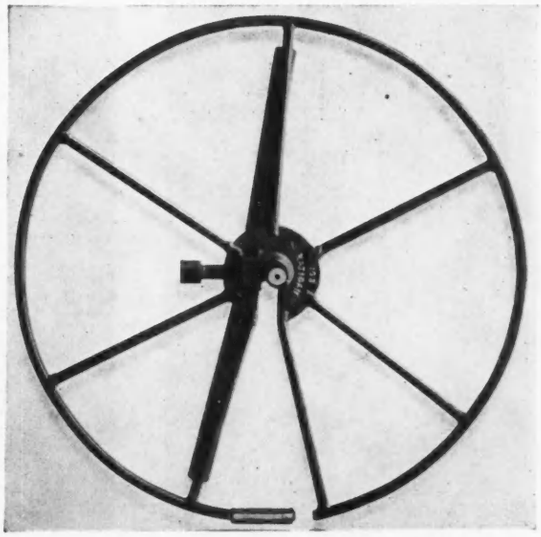
A small handle or trigger is located on the side of the tap body for unlatching the tap and collapsing the chasers by pressing back on the handle. The chasers are re-set by pressing against a plunger extending slightly beyond the rear of the tap shank. The tap shank is provided with a square end to fit a tap wrench. Any length of shank or tap can be supplied.

The collapsible hand tap can be furnished in all sizes from 1⅜-inch to 12-inch inclusive. Tap sizes and ranges conform with the regular machine collapsible taps manufactured by this company.

### SUCKER ROD WRENCH
**J. P. Ratigan Company**

J. P. Ratigan Company, Los Angeles, has announced the "Wheel Type Safety Rod Wrench," which was designed to allow twisting a string of sucker rods without endangering the men performing the operation. The manufacturer in developing the wrench considered the necessity for occasionally putting a twist in a string of sucker rods. After taking several turns in the rods, there is a tendency for the rods to spring back, and it is not unusual for the man on the derrick floor to slip or be thrown off balance.

The wrench was designed primarily for speed and safety. The hub grip in the center of the circle is so positioned that it can be operated from either side of the hub. It weighs 44 pounds and is strong enough to withstand the hardest pulls without damage. There is ample room for four men to pull on it. The entrance to the gripping means should be kept closed, whether in or out of operation. The closing is accomplished by a threaded movable sleeve.



**Ratigan Sucker Rod Wrench**

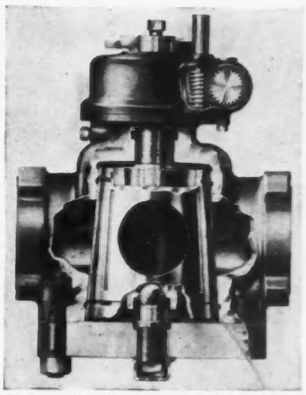
### VALVE SEATS
**Axelson Manufacturing Company**

Axelson Manufacturing Company, Los Angeles, has announced a pumping valve seat with a contour surface conforming in part to the contour of the ball. Originally valve seats were designed with a straight bevel on the seating area and no attempt was made to fit the seating to the ball. This was followed by a concaved surface lapped to the ball, giving a good fluid seal but leaving a sharp edge that was easily turned over if the ball seated improperly. The company developed the convex seat, which presents a line contact to the ball to eliminate the sharp edge, it is claimed.

### DRILLING VALVE
**Merco Nordstrom Valve Company**

Merco Nordstrom Valve Company, of Pittsburgh, Pennsylvania, has announced a new round opening cast alloy steel valve for use in connection with well heads and Christmas trees. It is used primarily as a master control valve and for drilling-through service on oil wells, and is known as the "Round Opening Hypreseal" valve.

Developed for high pressures and positive shut-off, the port is large enough to permit passage of drilling tools and tubing. The interior of the valve, when open, presents a smooth, continuous surface, permitting unrestricted flow and avoiding channeling. Present sizes include 6-inch and 7-inch. The 7-inch size weighs approximately 2300 pounds and is tested to 6000 pounds pressure. The body is made of cast steel which has a very high tensile strength, and the plug and stem are alloy steel.



**Merco Nordstrom Drilling Valve**

In this round opening valve the plug is inverted. Seating of the plug is effected by means of one steel ball adjusted through an impervious sealing diaphragm by one single screw. The single heavy-duty ball-bearing affords positive, accurate thrust without distortion or unbalanced load. The shank, which takes a great portion of the load, is threaded into the valve body and has a multiple-pressure lubricant seal which precludes any possibility of leakage through the threads. These threads carry the thrust and are positively sealed. The gear housing is entirely enclosed.

No part of the plug itself is at any place exposed to the atmosphere. It is a full-floating member.

### BELT LACING
**Flexible Steel Lacing Company**

Flexible Steel Lacing Company, 4607-31 Lexington Street, Chicago, Illinois, announces production of flexible steel belt lacing units for belts in excess of 12 inches in width. The larger sizes, from No. 15 to No. 75, are listed in lengths ranging from 14 to 96 inches, and special lengths are available in Monel metal and in non-sparking, non-magnetic alloys. When shipped the lacing is accompanied by hinge pins, handle gauge pins, and where needed, by rocker hinge pins.

#### Tool Joints

Hughes Tool Company, Houston, Texas, recently issued a very interesting bulletin on the care and operation of tool joints. The bulletin is featured by a number of remarkable photographs that show unusual instances of wear in tool joints. It will be mailed to interested persons upon request.

#### Synthetic Rubber

Thiokol Corporation, manufacturer of synthetic rubber, has begun the publication of "Thiokol Facts," an interesting monthly bulletin devoted to a description of manufacturing methods and uses of synthetic rubber.

#### Boilers

The Babcock & Wilcox Company, New York City, has ready for distribution Bulletin No. G-17-A, an attractive treatise on the company's "Integral-Furnace" boiler.

# This Week with the Industry's EQUIPMENT SUPPLIERS

## Ernie Adams With Pittsburgh Equitable

E. H. (Ernie) Adams, chemical engineer, well known on the Pacific Coast, has become associated with Merco Nordstrom Valve Company and Pittsburgh Equitable Meter Company. He will make his headquarters in the Los Angeles office of these concerns.

For many years Adams has been active in the natural gas industry and has been associated with various companies in charge of production. He is also well known in oil, chemical and hydraulic circles. He is a member of the California Natural Gasoline Association and the California Meter Association. He is a graduate of the University of California.

E. H. ADAMS

In his new position, he will devote his time to sales and engineering work in the interest of Pittsburgh Meters, Nordstrom Valves and allied products.

## Union Wire Rope Corporation Elects Officers and Directors

Directors of Union Wire Rope Corporation, at their recent annual meeting, feeling that the company's consistent growth rendered advisable an enlarged executive staff, created the new position of chairman of the board. R. H. Bartlett, who has been president of the corporation since its organization, was advanced to the position of chairman of the board, and M. G. Ensinger, who has been vice president and general manager, was advanced to president and general manager.

Officers and directors elected for the coming year are: R. H. Bartlett of Tulsa, president Bartlett Oil Corporation and director The Fourth National Bank of Tulsa, chairman of the board; M. G. Ensinger, Kansas City, president and general manager; H. R. Gruber, Tulsa, vice president and sales manager; J. H. Hatch, Kansas City, secretary and treasurer; J. C. Soll, Kansas City, assistant secretary and treasurer; H. M. Lawrence, Tulsa, assistant secretary and treasurer. Directors: R. H. Bartlett; M. G. Ensinger; H. R. Gruber; Frank L. Moore, Tulsa, independent oil operator and director Midcontinent Petroleum Corporation; H. O. McClure, Tulsa, president The Fourth National Bank of Tulsa; E. A. Reedy, Kansas City, vice president Schermerhorn Brothers Company; Phil D. Morelock of Shouse, Morelock & Shrador, attorneys and tax counselors of Kansas City, Tulsa, and Washington, D. C.

## Crane Company Lands Pipe Line Order

Crane Company, Chicago, announces it has been awarded a contract for all valves and fabricated piping required on a new line being constructed for the Michigan Gas Transmission Company by Columbia Gas & Electric Company. Included in this order are main line cast steel double disc gate valves, Venturi type, with 16 inch seats and 22-inch end flanges, equipped with bypasses; 12 inch cast steel double disc gate valves for river crossings; fabricated pipe tail pieces, and fabricated pipe river crossing manifolds.

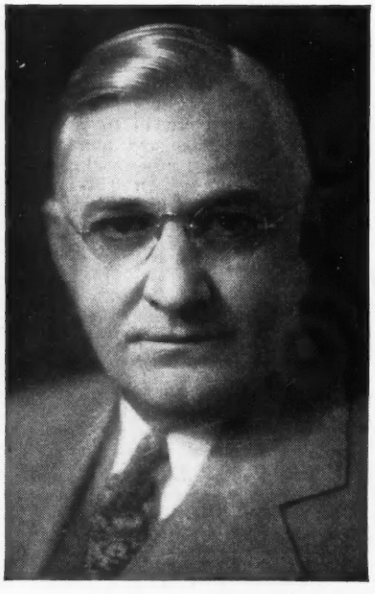
EARNEST N. PUETZ

## Emsco Elects Two New Directors

Stockholders of Emsco Derrick & Equipment Company, at their recent regular annual meeting, elected two new directors: Ernest W. Puetz and Mr. W. D. Davidson.

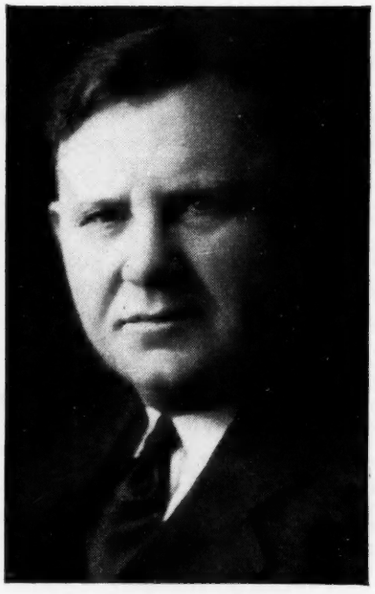
Davidson succeeds the late Edwin W. Goesser. He was with National Supply Company, Torrance, California, prior to 1923 when he became associated with Emsco Tool Company, which was merged with the Emsco Derrick & Equipment Company on January 1, 1926. Davidson is chief engineer for the mechanical division.

Puetz, who succeeds S. P. Farish as director, also holds the office of controller as well as assistant secretary and assistant treasurer, and has been with Emsco Derrick & Equipment Company since 1927. Prior to his association with this company he was employed by Blau-Knox Company at

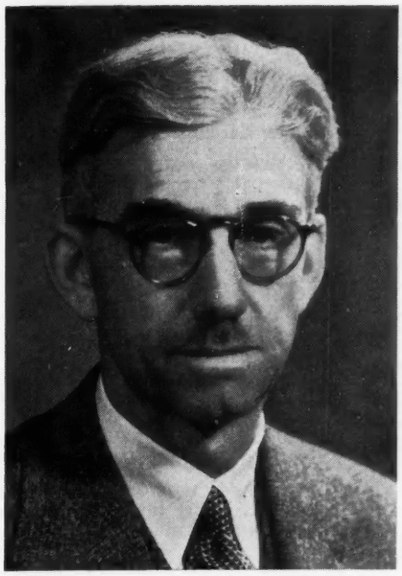


R. H. BARTLETT

M. G. ENSINGER



H. R. GRUBER



W. D. DAVIDSON

Pittsburgh for 15 years as assistant controller and special assistant to the operating vice president. He is a member of the Controllers' Institute of America.

## George L. Erwin, Jr., Joins Crane Company

Crane Company announces appointment of Mr. George L. Erwin, Jr., as assistant to P. R. Mork, vice president in charge of sales.

An engineering graduate of Cornell University, Erwin comes to Crane Company with the benefit of wide experience in sales and advertising. To take up his new duties, he has resigned his position as general sales manager of Kearney & Trecker Corporation, Milwaukee, manufacturers of machine tools. In his newly created position of assistant vice president of Crane Company he will develop sales and market research activities.

J. H. HATCH

## O. C. S. Building Plant at Houston

Oil Country Specialties Manufacturing Company of Coffeyville, Kansas, manufacturers of pumping equipment, has announced establishment of a branch plant at Houston. The company some time ago acquired 22 acres of land in the 12,000 block of Clinton road and according to Douglas Brown, vice president of the company who has been in Houston for 10 days, the original investment in building and assembly equipment will be between $40,000 and $50,000 exclusive of cost of land. F. R. Coggeshall is the engineer in charge of construction work for the company. Buildings soon to be erected will be of such construction as to admit of expansion as the business needs require.

## Myrberg to Des Moines For Pittsburgh Equitable

Pittsburgh Equitable Meter Company and its subsidiary, Merco Nordstrom Valve Company, Pittsburgh, announce that K. G. Myrberg has joined its sales force.

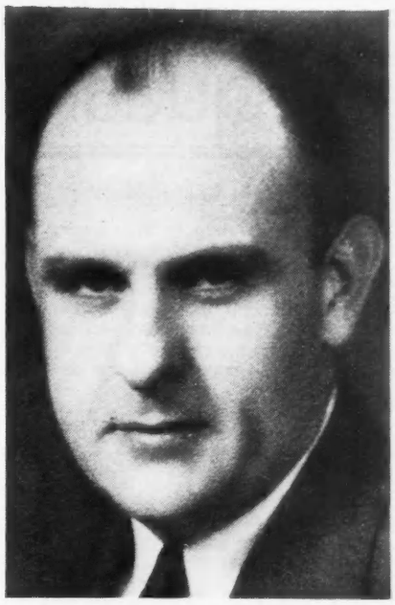
K. G. MYRBERG

After several years of field and executive work with two Midwestern railroads, Myrberg joined the National Cast Iron Pipe Company in 1923. He has been with this company and its successor, James B. Clow & Sons, Chicago, until his recent appointment. He will operate from the Des Moines, Iowa, office of the meter and valve company under the supervision of A. L. Fritchey, district manager.

## C. W. Cotton Company Organized at Tulsa

Forming a new company in Tulsa to act as sales representatives, C. W. Cotton and O. G. Houser have organized C. W. Cotton Company to represent, in Oklahoma and Kansas, several manufacturers of oil field equipment, including Prescott Pump Company, Wailes - Dove - Hermiston Corporation and the Scalebuoy line of water treating chemicals made by John G. Kelly Company in New York.

Cotton and Houser have had many years experience in oil equipment sales, the former having represented for some years the Wailes-Dove-Hermiston Corporation in the Southwest and Houser came to Tulsa in 1930 as assistant to the district manager of tubular sales for the Oklahoma-Kansas district of Continental Supply Company. He is vice chairman of the Tulsa chapter of the American Petroleum Institute.



S. T. McKENZIE

## S. C. McKenzie Joins Dresser Manufacturing

S. C. McKenzie has become associated with S. R. Dresser Manufacturing Company's field sales organization. He has had considerable experience with the sale and distribution of valves, pipe joints, and allied products in many industries.

## J. A. Morgan Joins Maloney

Maloney Tank Manufacturing Company has recently appointed J. A. Morgan sales manager for the Mid-Continent district.

Jim Morgan, as he is better known, has a background of a wide experience, having served a number of years with some of the major oil companies before 1920, and since that time has devoted his time to sales of oil field supplies.

J. A. MORGAN

# Squeaks from the Bull Wheel

### Unfinished Story

Among the mourners at a negro funeral in Georgia was a ventriloquist whose peculiar power of "throwing" his voice was unknown to the others. The details of all that happened will never be known, due to lack of eye witnesses. One of the mourners gave this somewhat sketchy version of what he saw and heard:

"Just when dey wuz startin' to lower Joe in his grave, he says 'Lemme down easy, boys.' Lawzee, dey just draps poor Joe in his grave an' runs."

"Did some one else finish the burial?" a bystander asked.

"Man, how wuz I to know? I nevah even stopped to look back."

### Braille System

"My girl slapped me last night."

"Why?"

"For studying arithmetic in the dark."

"How come?"

"Oh, I was going over figures."

### More Appropriate

One day a young lady with a poodle dog on her lap was riding in a street car. A prim woman sitting next to her sniffed:

"What a fuss you make over that dog. Don't you think it would be nicer if you had a little baby in your lap?"

"No," the pretty one replied. "You see, I'm not married."

### Too Much for Rope

Two Scots were mountaineering in Switzerland, when one of them slipped and fell into a crevasse. The other, peering over the edge, saw his companion holding on almost by his fingernails.

"Are ye a' richt, Macpherson?" shouted the man in safety.

"No exactly that," said the other, "but if ye run down to the village an' get a rope, I'll try to hang on here till ye come back. Hurry, for heaven's sake.

His companion disappeared, and was gone nearly an hour. Suddenly his face appeared again over the edge of the cliff.

"Are ye still there, Macpherson?" he called down.

"Aye," in a low, weary tone. "Have ye got the rope?"

"No, indeed. The dirty dogs in the village wanted two pounds for it."

### Not Him

Mother—"Now, Willie, I want you to go in and get acquainted with the new nurse and kiss her nicely."

Willie—"Yes, and get my face slapped like papa did."

### No Bonus

The teacher was curious to know why the boys called one of their number "Weatherstrip," so he asked him how he got his nickname.

"'Cause I kept my father out of the draft."

### And How

She: "Why do you always turn out the lights when you come to see me?"

He: "Oh, I feel better in the dark."

### The Circumstance

George—Awfully sorry I couldn't come to your party as I promised. Circumstances, over which I have no control, kept me away.

Charlie—That's quite all right, old chap. By the way, how is your wife?

### An Oversight

Daughter: "Father went off in a good humor today."

Mother: "That reminds me, I forgot to ask him for some money."

### Must Be Single

I was astonished this morning to find a ten dollar bill in my pocket.

Mm-m; I always thought you were married.

### Would Be Eligible

Teacher—Have you heard of Julius Caesar?

Pupil—Yes, sir.

What do you think he would be doing now if he were here today?

He would be pulling for old-age pensions.

### Wouldn't Work

Lapidus and Cohen, so the story goes, were two sheep ranchers. They owned adjoining farms; but they disliked each other most cordially.

One morning Lapidus rushed into the doctor's office.

"Doctor," he yodeled, "I got tarrible trouble. I cen't slipp at night. Vot's de bast tink I should doink so dot I cen gatt some slipp?"

The doctor shrugged. "The best remedy for insomnia," he advised, "is always the simplest one. You own a sheep ranch. Why don't you count your sheep jumping over a fence each night?"

Lapidus groaned loudly.

"I tried dot," he howled, "batt it's no good. De sheep kipp jumpink into Cohen's pasture."

### Or a 'Possum

For two hours he had been the pest of the party. His imitations were terrible, ranging anywhere from George Arliss to a humming-bird. In the far corner had been sitting the man with the screwed-up face.

"What would you like to see me imitate now?" asked the bore.

The man moved. He spoke. "How about a ground hog that's seen its shadow?"

### Fellow Feeling

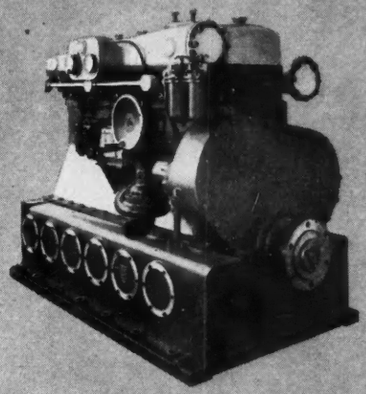
A celebrated white preacher had been engaged to address the congregation of a little Negro church and was being introduced by the colored pastor.

"Sistern and breddern," he began, "it affords me the extremest pleasuh to introduce de speaker of de evenin'. I wants to explain dat while his skin ain't de same color as de odders heah, I assures you his heart is as black as any of yourn."

Gotkool
WATER CANS
& COOLERS
Gott
WATER COOLER
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
GOTT WATER CAN
Made in 1½, 3, 5, and 10 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

# DE LA VERGNE DEPENDABILITY

IN A NEW SERIES OF COMPACT, LIGHT WEIGHT DIESEL ENGINES



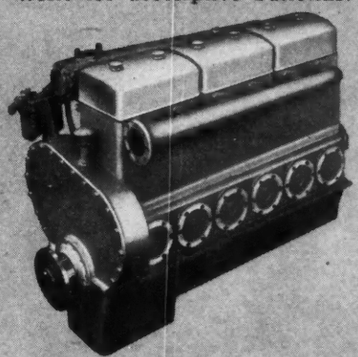
**4, 6 AND 8 CYLINDER SIZES**

Capacities Ranging from
**100 B.H.P. TO 400 B.H.P.**
at Engine Speeds from
**514 R.P.M. TO 1200 R.P.M.**

Thoroughly modern . . employing every worthwhile advance in high speed diesel engine design . . built of the finest materials ever used in diesel engine construction . . rugged, conservatively rated, thoroughly dependable.

Well adapted to generator drives, centrifugal pump drives, and such services as: industrial locomotives, rail cars, mobile cranes, tractors, etc.

Write for descriptive bulletins.



*Established Machinery Dealers Are Invited to Inquire Concerning Sales Agencies.*

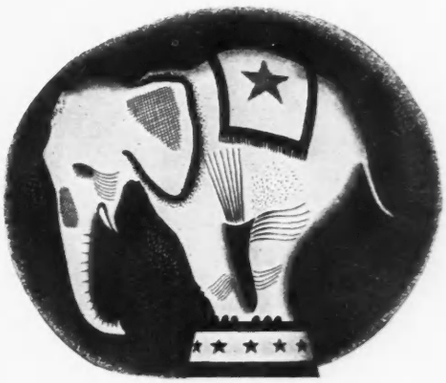
DE LA VERGNE DIESEL ENGINES

**DE LA VERGNE ENGINE CO.**
**PHILADELPHIA**
*Sales Agent for Baldwin-Southwark Corp. Subsidiary of Baldwin Locomotive Works*



# *Swell for the Circus*

BUT NOT FOR PIPE



Excess weight is all right for the circus elephant, but not for gas-gathering lines that must go in swiftly and do their work efficiently.

That's why oil men in all the important fields are turning to ARMCO Spiral Welded Pipe. Here, at last, is a trim, easy-handling pipe that offers a wide range of diameters and wall thicknesses. And inside it's about as smooth as you could ask.

Designing with ARMCO Spiral Welded Pipe, you can specify the one right wall thickness for the job. And remember, it gives you exceptional strength and ductility, easy-installation features, and the finest welding quality.

Mail your pipe specifications to Armco; or write us for specific information bearing upon your needs. You can reach us quickly at either of the addresses shown below. The American Rolling Mill Co., Pipe Sales Div., 703 Curtis St., Middletown, O.; Tulsa, Okla., 538 Mayo Bldg.

ARMCO

**ARMCO**
**SPIRAL WELDED PIPE**

# INDEX TO ADVERTISERS


### A

Page

J. S. Abercrombie Co. — 
Abercrombie Pump Co. 149
Allsteel Products Manufacturing Co. 25
Alten's Foundry & Machine Co. — 
American Askania Corporation — 
American Assn. of Petroleum Geologists — 
American Cable Co. 77
American Hammered Piston Ring Co. 62-63
American Hoist & Derrick Co. — 
American Iron & Machine Works 33
American Lubricator Co. — 
American Meter Co. — 
American Roller Bearing Co. 71
American Rolling Mill Co. 161
American Sand-Banam Co. 156
American Seismograph Co. 154
American Steel & Wire Co. — 
Armstrong Brothers Tool Co. — 
Ash Grove Lime & Portland Cement Co. — 
Athey Truss Wheel Co. — 
Atlas Powder Co. — 
Axelson Manufacturing Co. — 

### B

Baash-Ross Tool Co. 9
Baker Oil Tools, Inc. 30-31
Baldwin-Duckworth Chain Corp. 117
Baroid Sales Co. Third Cover
The Barrett Co. 105
Wm. M. Barret, Inc. 154
Beaumont Iron Works — 
Beaver Pipe Tools, Inc. 141
Mills Bennett Production Co. — 
Black-Sivalls & Bryson — 
Bradford Motor Works — 
Brauer Machine & Supply Co. — 
The Brewster Co. 14
Bridgeport Machine Co. 7
Broderick & Bascom Rope Co. — 
Brown Tool Co. — 
Buckeye Traction Ditcher Co. 156
A. M. Byers Co. — 
Byron Jackson Co. 12-13

### C

Cameron Iron Works 115
Carson Machine & Supply Co. — 
J. I. Case Co. — 
The Cavins Co. 144
Chain Belt Co. 79
Chiksan Oil Tool Co. 135
Chemical Process Co. 8
Clark Brothers Co. — 
Clark Hotel 155
Robert P. Clark Co. 154
Columbian Steel Tank Co. — 
Continental National Bank — 
Continental Oil Co. 106
The Continental Supply Co. 81
Fred E. Cooper Co. — 
Cooper-Bessemer Corp. 3
The Corbett Corp. — 
Core Drilling Co. — 
W. H. Curtin Co. 130

### D

Darling Valve & Manufacturing Co. 87
The Dayton Rubber Manufacturing Co. 99
Dean Core Barrel Mfg. Sales & Service 67
De La Vergne Engine Co. 161
Demag, A. G. 133
Diamond Metal Co. — 
David Donoghue 154
Dowell Incorporated — 
E. I. du Pont de Nemours & Co. 16

### E

Eastman Oil Well Survey Co. of Texas — 
Economy Electric Lantern Co. 152
Elliott Core Drilling Co. 17
Emsco Derrick & Equipment Co. — 
Exner-Dodge Packing Co. — 

### F

Geo. E. Failing Supply Co. — 
First National Bank of Fort Worth — 
First National Bank, Houston 89
First National Bank & Trust Co. of Tulsa — 
Foote Bros. Gear & Machine Works — 
Fort Worth Laboratories 154
Fort Worth National Bank — 
Four Wheel Drive Auto Co. — 
Frick-Reid Supply Corp. 37

### G

Gardner-Denver Co. 73
The Garlock Packing Co. 156
Garrott Brass & Machine Co. 131
Gas Power, Inc. 142
Gaso Pump & Burner Mfg. Co. — 
General Electric Co. 4
L. H. Gilmer Co. — 
Globe Oil Tools Co. — 
Goodall Rubber Co. of Texas — 
B. F. Goodrich Rubber Co. — 
Goodyear Tire & Rubber Co. — 
H. P. Gott Manufacturing Co. 160
Grant Oil Tool Co. 69
Gray-Kerotest — 
Gray Tool Co. 112-113
Greene, Tweed & Co. 155
The Guiberson Corp. — 
Gulf Envelope Co. — 
Gulf Publishing Co. — 
Gulf States Utilities 137
Gustin-Bacon Manufacturing Co. — 

### H

Hall & Lowrey, Inc. 138
Halliburton Oil Well Cementing Co. — 
Hardway & Cathey 154
Harrisburg Steel Corp. — 
Haynes Stellite Co. 65
Hazard Wire Rope Co. — 
C. M. Heeter Sons & Co. — 
Hercules Motors Corp. — 
Hercules Tool Co. — 
Hewitt Rubber Corp. — 
Hinderliter Tool Co. 85
Hoard Exploration Co. 154
Chas. N. Hough Manufacturing Co. 131
Houston Oil Field Material Co. — 
Houston Ready-Cut House Co. 136
Hughes Tool Co. Fourth Cover
Hyatt Roller Bearing Co. — 
Hydril Co. — 

### I

Independent Exploration Co. 121
Independent Pipe & Supply Co. 119
Ingersoll-Rand Co. — 
International Cement Corp. — 
International Derrick & Equipment Co. — 
International Harvester Co. 27
The International Nickel Co. — 
The International Petroleum Exposition — 

### J

Byron Jackson Co. 12-13
Jarecki Manufacturing Co. — 
Jensen Brothers Manufacturing Co. — 
Johns-Manville 153
S. M. Jones Co. 18
Jones & Laughlin Steel Corp. — 
Earle M. Jorgensen Co. — 

### K

Kerotest Manufacturing Co. 75
Kibele Manufacturing Co. 41

### L

Lamb Piston Sales Co. 140
Landis Machine Co. — 
L. Lapierre — 
Larkin Packer Co. Second Cover
The Lane-Wells Co. 53
The Layne & Bowler Co. 152
James M. Leopold & Co. — 
A. Leschen & Sons Rope Co. 47
M. J. Lewis Oil Well Service — 
The Lincoln Electric Co. — 
Link Belt Co. 101 and 145
Louisiana Supply Co. — 
Lucey Boiler & Manufacturing Corp. — 
Neal Lucey Co. — 
Ludlow Valve Manufacturing Co. — 
Lufkin Foundry & Machine Co. 11

### M

M. & V. Tank Co. — 
MacClatchie Manufacturing Co. 127
Maintenance Engineering Corp. 120
D. S. Mair Machinery Corp. 154
Maloney Tank Manufacturing Co. — 
Manufacturers Supply Co. — 
Martin-Decker Corp. — 
F. G. Masquelette & Co. — 
McAlpin Hotel — 
McIntosh & Seymour Corp. — 
Geo. S. Mepham Corp. — 
Merco Nordstrom Valve Co. — 
Miller Sand Pump Co. — 
Mission Manufacturing Co. 59
Lee C. Moore & Co. — 
Muskogee Iron Works — 

### N

National Bank of Tulsa 124
National Exploration Co. 154
The National Supply Co. 29
National Tank Co. — 
National Tube Co. — 
Naylor Pipe Co. — 
New Deal Specialty Co. — 
Norvell-Wilder Supply Co. 48-49

### O

Page

Walter O'Bannon Co. 146
Oil Center Tool Co. — 
Oil City Brass Works — 
Oil Development Co. of Florida — 
Oil Equipment & Engineering Exposition — 
Oil Well Supply Co. — 
The Oil Weekly 93-94-95
Otis Pressure Control — 

### P

The Parkersburg Rig & Reel Co. 20
Patterson-Ballagh Corp. 57
Pelican Well Tool & Supply Co. 139
Petroleum Electric Power Club 50
Petroleum Rectifying Co. 10
Petty Geophysical Engineering Co. — 
Picadilly Hotel — 
The Pierce Governor Co. 134
Pittsburgh Equitable Meter Co. — 
Pittsburgh Steel Co. 91
Portable Rig Co. — 
Producers Supply & Tool Co. — 

### R

J. P. Ratigan Co. — 
Raybestos Manhattan, Inc. — 
Reading Iron Co. — 
Rector Well Equipment Co. — 
Red Rex Corp. — 
Reed Roller Bit Co. First Cover
The Republic Rubber Co. 15
Republic Steel Corp. 44-45
Norman H. Ricker 154
The Ridge Tool Co. — 
Dewey T. Ross, Inc. — 
Walter Ruska & Co. 154

### S

J. A. Schley — 
Schlumberger Well Surveying Corp. — 
Security Engineering Co. 6
Seismic Explorations, Inc. — 
Second National Bank — 
J. E. Shaffer Co. — 
The Shaffer Specialty Co. 151
Shaffer Tool Works 97
Shand & Jurs Co. — 
Shell — 
Sinclair Refining Co. — 
SKF Industries, Inc. 43
A. O. Smith Corp. 38-39
E. M. Smith Co. 128
Nowery J. Smith Supply Co. — 
South Chester Tube Co. — 
South Texas Geophysical Co. 155
Southern Engine & Pump Co. — 
Southern Pacific Lines — 
Southern States Co. — 
Spang & Co. — 
Spang, Chalfant & Co. 83
Sperry-Sun Well Surveying Co. 150
Star Drilling Machine Co. — 

### T

Templeton, Kenly & Co. — 
Texas Electric Steel Castings Co. — 
Texas Iron Works 54-55
Texas-Louisiana Exploration Co. — 
Thermoid Rubber Co. — 
Thornhill-Craver Co. — 
The Timken Roller Bearing Co. — 
Tips Engine Works 103
Titusville Iron Works Co. — 
Tnemec Co. — 
Edgar Tobin Aerial Surveys — 
Torsion Balance Exploration Co. — 
Tretolite Co. — 
Trimont Manufacturing Co. — 
Twin Disc Clutch Co. 34

### U

Union Carbide & Carbon Corp. — 
Union Wire Rope Co. — 
United States Rubber Products, Inc. — 
United States Steel Corp. — 

### V

Volcano Burner Co. — 

### W

Waukesha Motor Co. — 
Westinghouse Electric & Mfg. Co. — 
The Wheland Co. — 
Wickwire-Spencer Steel Co. 5
J. H. Williams & Co. 131
W-K-M Co. — 
Williamsport Wire Rope Co. 133
Wilson-Snyder Manufacturing Co. — 
Wilson Supply Co. — 

### Y

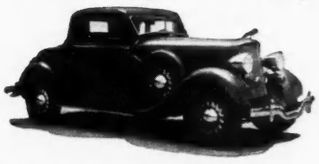
Youngstown Sheet & Tube Co. 61

# TODAY—MUD IS A *Different* PROBLEM

OLD-TIMERS of the oil fields still talk about the days when heroic, hard-boiled teamsters with cracking whips cussed stubborn mules and heavy loads through slimy, sticky, hub-deep mud.

Today—mud is a different problem! When properly conditioned, it plays a leading part in safer, faster, more economical drilling. The deeper the well, the more essential that properly controlled mud be used.

BAROID—weighted drilling muds, when properly used, control oil, gas and water pressures and hold in place formations which tend to cave or slough into the hole.



*BAROID Service Engineers with specially-equipped cars make mud tests right at your well. Our up-to-date laboratories at Los Angeles, Houston and Tulsa provide drilling mud research of inestimable value to the Oil Industry.*

AQUAGEL—conditioned drilling muds, properly used, help prevent caving, loss of circulation, stuck drill pipe and casing; help to reduce abrasion, suspend drilling mud solids and seal off fissures, caves and minor flows of gas and water.

STABILITE reduces the viscosities of thick drilling muds and increases their wall-building properties. STABILITE muds quickly release gas from gas-cut muds.

BAROCO clay makes 40 barrels of excellent 15 centipoise viscosity drilling mud per ton, builds a better wall than ordinary clays, and resists the "flocculating" action of salt and salt waters.

BAROID Products and Service will greatly assist you in the solution of your drilling mud problems. Be sure to use them—for best results!

**BAROID PRODUCTS**

**BAROID:** Extra-Heavy Colloidal Drilling Mud

**AQUAGEL:** Trouble-Proof Colloidal Drilling Mud

**STABILITE:** An Improved Chemical Mud Thinner

**BAROCO:** An Economical Salt Water-Resisting Drilling Clay

Stocks carried and Service Engineers available in all active oil fields. (BAROCO in Mid-Continent and Gulf Coast only).

## BAROID SALES COMPANY

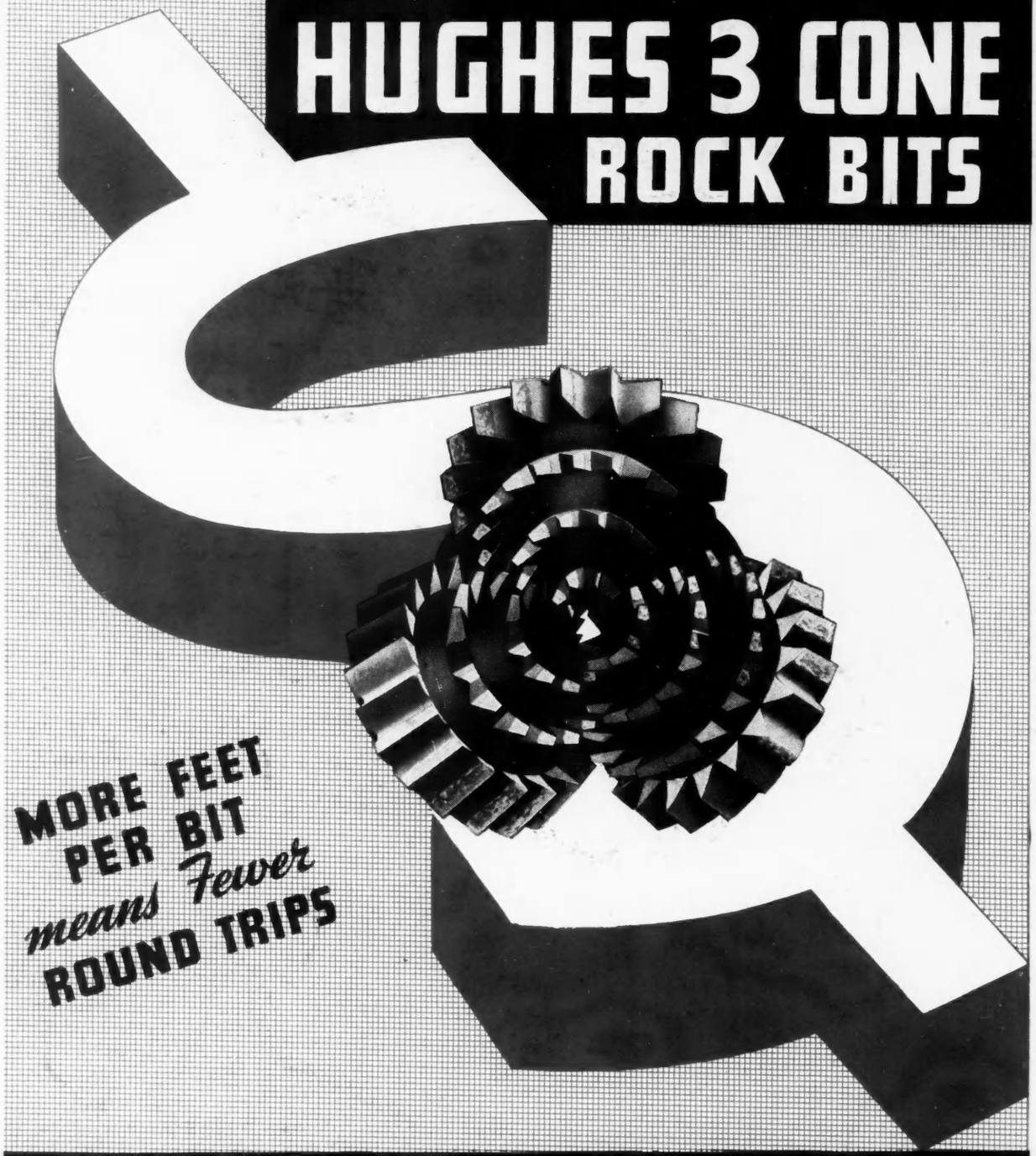
LOS ANGELES • TULSA • HOUSTON

NATIONAL PIGMENTS & CHEMICAL COMPANY, ST. LOUIS

# ROUND TRIPS COST DOLLARS

*Save them!..Use*

# HUGHES 3 CONE ROCK BITS



**MORE FEET PER BIT** *means Fewer* **ROUND TRIPS**

## HUGHES TOOL COMPANY

**HOUSTON, TEXAS**

BRANCH SERVICE PLANTS:
LOS ANGELES, CALIF.
OKLAHOMA CITY, OKLA.
MIDLAND, TEXAS

FIELD WAREHOUSES: ADA, OKLA. — SEMINOLE, OKLA.—PAMPA, TEX.
HUTCHINSON, KANSAS—EUNICE, NEW MEXICO—RODESSA, LOUISIANA

EUROPEAN REPRESENTATIVE: 6 FINSBURY SQ., LONDON, E. C. 2, ENGLAND

EXPORT OFFICE:
30 ROCKEFELLER PLAZA
NEW YORK CITY, U. S. A.
CABLE ADDRESS "HUGHESTOOL"